SEQ 61
=> s qfgghnsvdfeedt/sqep

1 QFGGHNSVDFEEDT/SQEP
26675 SQL=14
L13 1 QFGGHNSVDFEEDT/SQEP
(QFGGHNSVDFEEDT/SQEP AND SQL=14)

=> d sqide

L13 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2001 ACS
RN 142062-19-9 REGISTRY
CN L-Threonine, L-glutaminyl-L-phenylalanylglycylglycyl-L-histidyl-L-asparaginyl-L-seryl-L-valyl-L-.alpha.-aspartyl-L-phenylalanyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL ***14***

SEQ 1 QFGGHNSVDF EEDT
========== ====
HITS AT: 1-14
MF C67 H92 N18 O27
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

3 REFERENCES IN FILE CA (1967 TO DATE)
3 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=> file caplus uspatfull

=> s 142062-19-9/rn

L14 4 142062-19-9/RN

=> d ibib ab 1-4

L14 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:146776 CAPLUS
DOCUMENT NUMBER: 132:292413
TITLE: Synthetic peptide immunogens elicit polyclonal and monoclonal antibodies specific for linear epitopes in the D motifs of Staphylococcus aureus fibronectin-binding protein, which are composed of amino acids that are essential for fibronectin binding
AUTHOR(S): Huesca, Mario; Sun, Qing; Peralta, Robert; Shivji, Gulnar M.; Sauder, Daniel N.; McGavin, Martin J.
CORPORATE SOURCE: Divisions of Microbiology, Laboratory Medicine and Pathobiology, Sunnybrook and Women's College Health Sciences Centre, North York, ON, M4N 3M5, Can.
SOURCE: Infect. Immun. (2000), 68(3), 1156-1163
CODEN: INFIBR; ISSN: 0019-9567
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A fibronectin (Fn)-binding adhesin of Staphylococcus aureus contains three tandem 37- or 38-amino-acid motifs (D1, D2, and D3), which function to bind Fn. Plasma from patients with S. aureus infections contain antibodies that preferentially recognize ligand induced binding sites in the D motifs and do not inhibit Fn binding. To eliminate the influence of

Fn binding on antibody development, the authors used synthetic peptide immunogens D121-34 and D320-33, which each contain a conserved pattern of amino acids that is essential for Fn binding but which cannot bind Fn without N- or C-terminal extensions. The D320-33 immunogen promoted the prodn. of polyclonal antibodies that were 10-fold more effective as inhibitors of Fn-binding to the D3 motif than antibodies obtained by immunizing with an extended peptide D316-36, which exhibits functional Fn binding. The D320-33 immunogen also facilitated the prodn. of a monoclonal antibody, 9C3, which was highly specific for the epitope SVDFEED, and abolished Fn binding by the D3 motif. When mixed with polyclonal anti-D121-34 IgG, 70% inhibition of Fn binding to the three tandem D motifs was achieved compared to no more than 30% inhibition with either antibody prepn. alone. Therefore, by immunizing with short synthetic peptides that are unable to bind Fn, the authors have effectively stimulated the prodn. of antibodies specific for epitopes comprised of amino acids that are essential for Fn binding. Although these epitopes occur within a conserved pattern of amino acids that is required for Fn binding, the antibodies recognized specific linear epitope sequences and not a conserved structure common to all repeated motifs.

REFERENCE COUNT: 40

REFERENCE(S): (3) Balaban, N; Science 1998, V280, P438 CAPLUS
(4) Brennan, F; Vaccine 1999, V17, P1846 CAPLUS
(5) Casolini, F; Infect Immun 1998, V66, P5433 CAPLUS
(6) Fattom, A; Ann Med 1996, V28, P43 CAPLUS
(7) Fattom, A; Infect Immun 1996, V64, P1659 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1998:509122 CAPLUS
DOCUMENT NUMBER: 129:148069

TITLE: Fibronectin binding protein compositions, antibodies thereto, and methods of use

INVENTOR(S): Hook, Magnus; Patti, Joseph M.; House-Pompeo, Karen L.; Speziale, Petro; Joh, Danny; McGavin, Martin J.
PATENT ASSIGNEE(S): The Texas A & M University System, USA

SOURCE: PCT Int. Appl., 201 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9831389	A2	19980723	WO 1998-US1222	19980121
WO 9831389	A3	19990121		

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

AU 9866479	A1	19980807	AU 1998-66479	19980121
EP 971740	A2	20000119	EP 1998-908439	19980121

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

PRIORITY APPLN. INFO.: US 1997-36139 19970121
WO 1998-US1222 19980121 .

AB Disclosed are antibodies that block the binding of fibronectin protein to fibronectin. Also disclosed are site specifically-mutated and truncated

peptide epitopes derived from the fnbA and fnbB genes of Staphylococcus aureus, the fnbA and fnbB genes of Streptococcus dysgalactiae, and the sfb gene of Streptococcus pyogenes, and nucleic acid segments encoding these peptides and epitopes. The anti-(fibronectin binding site) antibodies, peptides and epitopes that give rise to antibodies that block the binding of fibronectin binding proteins to fibronectin, and DNA segments encoding these proteins and are of use in various screening, diagnostic and therapeutic applications including active and passive immunization and methods for the prevention of streptococcal and staphylococcal colonization in animals or humans. These DNA segments and the peptides derived therefrom are proposed to be of use directly in the prepn. of vaccines and also for use as carrier proteins in vaccine formulations.

L14 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1992:444088 CAPLUS
DOCUMENT NUMBER: 117:44088
TITLE: Chemically modified fibronectin-binding peptides and fragments
INVENTOR(S): Hoeoek, Magnus; McGavin, Martin; Raucci, Guiseppe
PATENT ASSIGNEE(S): Alfa-Laval Agri International AB, Swed.
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9202555	A1	19920220	WO 1991-SE534	19910809
W: AU, CA, FI, HU, JP, NO, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
CA 2067233	AA	19920211	CA 1991-2067233	19910809
AU 9184118	A1	19920302	AU 1991-84118	19910809
AU 632001	B2	19921210		
EP 504335	A1	19920923	EP 1991-914903	19910809
EP 504335	B1	19971210		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
HU 61035	A2	19921130	HU 1992-1211	19910809
HU 219261	B	20010328		
JP 05502046	T2	19930415	JP 1991-514015	19910809
AT 161018	E	19971215	AT 1991-914903	19910809
ES 2112862	T3	19980416	ES 1991-914903	19910809
FI 9201582	A	19920409	FI 1992-1582	19920409
NO 9201407	A	19920605	NO 1992-1407	19920409
US 5440014	A	19950808	US 1994-234622	19940428

PRIORITY APPLN. INFO.: SE 1990-2617 A 19900810
WO 1991-SE534 A 19910809
US 1992-846995 B1 19920608
US 1993-55783 B1 19930503
OTHER SOURCE(S): MARPAT 117:44088
AB Fibronectin-binding peptides R1-PSYQFGGHNSVDFEEDT-R2 (R1 = H, K, DK; R2 = OH, L, LP, LPK) are claimed. Synthetic peptides, peptide fragments, and chem. modified peptides derived from a Staphylococcus aureus fibronectin-binding protein homol. unit (D3) were prepd., and the activity of the peptides (ability to compete with S. aureus cells for binding to 125I-labeled fibronectin or fragment) was detd. The fibronectin-binding region of D3 was reduced to a 14-residue core peptide essential for activity but alone not sufficient to inhibit binding; addn. of a tripeptide to the amino-terminus or carboxy-terminus of this core peptide resulted in a dramatic recovery of activity. The fibronectin-binding peptides of the invention can be used for vaccination, wound healing,

blocking protein receptors, or for an ELISA.

L14 ANSWER 4 OF 4 USPATFULL
ACCESSION NUMBER: 95:71464 USPATFULL
TITLE: Fibronectin binding peptide
INVENTOR(S): Hook, Magnus, 129 Stevens Hill Cir., Birmingham, AL, United States 35244
McGavin, Martin, 1717 Beacon Crest Cir., Birmingham, AL, United States 35209
Raucci, Guiseppe, Via Tito Speri 10, I-00040 Pomezia, Rome, Italy

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5440014		19950808
APPLICATION INFO.:	US 1994-234622		19940428 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1993-55783, filed on 3 May 1993, now abandoned which is a continuation of Ser. No. US 1992-846995, filed on 8 Jun 1992, now abandoned

	NUMBER	DATE
PRIORITY INFORMATION:	SE 1990-2617	19900810

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Warden, Jill
ASSISTANT EXAMINER: Marshall, S. G.
LEGAL REPRESENTATIVE: Burns, Doane, Swecker & Mathis
NUMBER OF CLAIMS: 1
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6 Drawing Figure(s); 6 Drawing Page(s)
LINE COUNT: 679
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A fibronectin binding peptide having the structure R'-PSYQFGGHNS VDFEEDT-R.sup.2 wherein R' is hydrogen, K or DK, and R.sup.2 is hydroxy, L, LP or LPK is disclosed. The fibronectin binding proteins of the present invention may be used, for example, for vaccination of ruminants against mastitis caused by Staphylococcal infections, for the treatment of wounds, e.g., for blocking protein receptors or for immunization (vaccination) against infection by bacterial strains, and for diagnosis of bacterial infections caused by Staphylococci strains.

SEQ ID NO: 2

=> s eedtekdkpk/sqep

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          0 EEDTEKDKPK/SQEP
      72119 SQL=10
L1        0 EEDTEKDKPK/SQEP
            (EEDTEKDKPK/SQEP AND SQL=10)
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=> s eedtekdkpk/sqsp

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L2       28 EEDTEKDKPK/SQSP
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=> l2 and sql<15

```
L2 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).
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=> s l2 and sql<15

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     430200 SQL<15
L3        1 L2 AND SQL<15
```

=> d sqide

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L3  ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2001 ACS
RN  187102-35-8  REGISTRY
CN  L-Lysine, L-seryl-L-phenylalanyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-
    .alpha.-aspartyl-L-threonyl-L-.alpha.-glutamyl-L-lysyl-L-.alpha.-aspartyl-
    L-lysyl-L-prolyl- (9CI)  (CA INDEX NAME)
FS  PROTEIN SEQUENCE; STEREOSEARCH
SQL  ***12***

SEQ    1 SFEEDTEKDK PK
          ======== ==
HITS AT:  3-12
MF  C62 H97 N15 O25
SR  CA
LC  STN Files:  CA, CAPLUS
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=> file CAplus

=> s 187102-35-8/rn

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          1 187102-35-8
          0 187102-35-8D
L4        1 187102-35-8/RN
            (187102-35-8 (NOTL) 187102-35-8D )
```

=> d ibib ab

```
L4  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2001 ACS
ACCESSION NUMBER:       1997:97450  CAPLUS
DOCUMENT NUMBER:        126:210757
TITLE:                  Identification of D motif epitopes in Staphylococcus
                        aureus fibronectin-binding protein for the production
                        antibody inhibitors of fibronectin binding
AUTHOR(S):              Sun, Qing; Smith, Gregory M.; Zahradka, Catherine;
```

McGavin, Martin J.
CORPORATE SOURCE: Dep. Med. Microbiol., Univ. Manitoba, Winnipeg, MB, R3E 0W3, Can.
SOURCE: Infect. Immun. (1997), 65(2), 537-543
CODEN: INFIBR; ISSN: 0019-9567
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A fibronectin-binding protein (FnBP) adhesin of Staphylococcus aureus possesses three 37- or 38-amino-acid motifs (D1, D2, and D3) that can each bind fibronectin (Fn) with low affinity and that in tandem comprise D1-3, a high-affinity Fn-binding domain. To identify epitopes for the generation of adhesion-blocking antibodies, rabbits were immunized with recombinant D1-3 or with a glutathione S-transferase fusion protein, GSTD1-3. Affinity-purified antibodies from the D1-3 immunization were poor inhibitors of Fn binding to S. aureus and recognized several different epitopes, with a preference for clusters of acidic amino acids that do not contribute to Fn binding. Antibodies generated with GSTD1-3 as an immunogen were more effective inhibitors, but concns. in excess of 20 .mu.g/mL did not promote more than 50% inhibition. These antibodies were highly specific for amino acids 21-34 of D1 (D121-34), which contain a sequence that is essential for Fn binding and are identical to D2 at 12 of 14 residues. Neither antibody prepn. recognized D320-33 of the D3 motif, where the only homol. to D121-34 and D221-34 comprises a sequence motif, GG(X3,4)(I/V)DF, that is crit. to Fn binding. However, antibodies specific for both D121-34 and D320-33 could be obtained by using synthetic peptides corresponding to these sequences as immunogens. F(ab')2 fragments derived from these antibodies each caused 40-50% inhibition of Fn binding to S. aureus, and their ability to bind to purified FnBP was eliminated by competing Fn. However, mixts. of the two F(ab')2 prepns. did not provide additive or synergistic inhibition of Fn binding. Therefore, inhibition of Fn binding to S. aureus requires antibodies specific for D121-34 and D320-33, but a mixt. of antibodies specific for both sequences did not provide complete inhibition.

SEQ ID NO: 3

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=> s advveyeedtnpgggqvttesnlvefdeest/sqep

         0 ADVVEYEEDTNPGGGQVTTESNLVEFDEEST/SQEP
     20879 SQL=31
L5       0 ADVVEYEEDTNPGGGQVTTESNLVEFDEEST/SQEP
           (ADVVEYEEDTNPGGGQVTTESNLVEFDEEST/SQEP AND SQL=31)

=> s advveyeedtnpgggqvttesnlvefdeest/sqsp

L6       6 ADVVEYEEDTNPGGGQVTTESNLVEFDEEST/SQSP

=> s l6 and sql<35

   1052946 SQL<35
L7       0 L6 AND SQL<35

=> s l6 and sql<40

   1123049 SQL<40
L8       0 L6 AND SQL<40

=> d l6 sqide 1-6


L6  ANSWER 1 OF 6  REGISTRY  COPYRIGHT 2001 ACS
RN  364145-35-7  REGISTRY
CN  Protein (Staphylococcus aureus clone SAU200916 proliferation-associated
    fragment) (9CI)  (CA INDEX NAME)
OTHER NAMES:
CN  4247: PN: WO0170955 SEQID: 5797 claimed protein
FS  PROTEIN SEQUENCE
SQL  1018

SEQ    1 VKNNLRYGIR KHKLGAASVF LGTMIVVGMG QDKEAAASEQ KTTTVEENGN
      51 SATDNKTSET QTTATNVNHI EETQSYNATV TEQPSNATQV TTEEAPKAVQ
     101 APQTAQPANI ETVKEEVVKE EAKPQVKETT QSQDNSGDQR QVDLTPKKAT
     151 QNQVAETQVE VAQPRTASES KPRVTRSADV AEAKEASNAK VETGTDVTSK
     201 VTVEIGSIEG HNNTNKVEPH AGQRAVLKYK LKFENGLHQG DYFDFTLSNN
     251 VNTHGVSTAR KVPEIKNGSV VMATGEVLEG GKIRYTFTND IEDKVDVTAE
     301 LEINLFIDPK TVQTNGNQTI TSTLNEEQTS KELDVKYKDG IGNYYANLNG
     351 SIETFNKANN RFSHVAFIKP NNGKTTSVTV TGTLMKGSNQ NGNQPKVRIF
     401 EYLGNNEDIA KSVYANTTDT SKFKEVTSNM SGNLNLQNNG SYSLNIENLD
     451 KTYVVHYDGE YLNGTDEVDF RTQMVGHPEQ LYKYYYDRGY TLTWDNGLVL
     501 YSNKANGNGK NGPIIQNNKF EYKEDTIKET LTGQYDKNLV TTVEEEYDSS
     551 TLDIDYHTAI DGGGGYVDGY IETIEETDSS AIDIDYHTAV DSEAGHVGGY
     601 TESSEESNPI DFEESTHENS KHHADVVEYE EDTNPGGGQV TTESNLVEFD
                      ======= ========== ==========
     651 EESTKGIVTG AVSDHTTVED TKEYTTESNL IELVDELPEE HGQAQGPVEE
           ====
     701 ITENNHHISH SGLGTENGHG NYDVIEEIEE NSHVDIKSEL GYEGGQNSGN
     751 QSFEEDTEED KPKYEQGGNI VDIDFDSVPQ IHGQNKGNQS FEEDTEKDKP
     801 KYEHGGNIID IDFDSVPHIH GFNKHTEIIE EDTNKDKPSY QFGGHNSVDF
     851 EEDTLPKVSG QNEGQQTIEE DTTPPIVPPT PPTPEVPSEP ETPTPPTPEV
     901 PSEPETPTPP TPEVPSEPET PTPPTPEVPA EPGKPVPPAK EEPKKPSKPV
     951 EQGKVVTPVI EINEKVKAVA PTKKPQSKKS ELPETGGEES TNKGMLFGGL
    1001 FSILGLALLR RNKKNHKA
HITS AT:  624-654
MF  Unspecified
CI  MAN
SR  CA
LC  STN Files:  CA, CAPLUS
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1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L6 ANSWER 2 OF 6 REGISTRY COPYRIGHT 2001 ACS
RN 341089-10-9 REGISTRY
CN Fibronectin-binding protein (Staphylococcus aureus strain Mu50 gene fnb)
(9CI) (CA INDEX NAME)
OTHER NAMES:
CN GenBank AP003365-derived protein GI 14248277
FS PROTEIN SEQUENCE
SQL 1038

SEQ 1 MKNNLRYGIR KHKLGAASVF LGTMIVVGMG QDKEAAASEQ KTTTVEENGN
51 SATDNKTSET QTTATNVNHI EETQSYNATV TEQPSNATQV TTEEAPKAVQ
101 APQTAQPANV ETVKEEEKPQ VKETTQPQDN SGNQRQVDLT PKKVTQNQGT
151 ETQVEVAQPR TASESKPRVT RSADVAEAKE ASDVSEVKGT DVTSKVTVES
201 GSIEAPQGNK VEPHAGQRVV LKYKLKFADG LKRGDYFDFT LSNNVNTYGV
251 STARKVPEIK NGSVVMATGE ILGNGNIRYT FTNEIEHKVE VTANLEINLF
301 IDPKTVQSNG EQKITSKLNG EETEKTIPVV YNPGVSNSYT NVNGSIETFN
351 KESNKFTHIA YIKPMNGNQS NTVSVTGTLT EGSNLAGGQP TVKVYEYLGK
401 KDELPQSVYA NTSDTNKFKD VTKEMNGKLS VQDNGSYSLN LDKLDKTYVI
451 HYTGEYLQGS DQVNFRTELY GYPERAYKSY YVYGGYRLTW DNGLVLYSNK
501 ADGNGKNGQI IQDNDFEYKE DTAKGTMSGQ YDAKQIIETE ENQDNTPLDI
551 DYHTAIDGEG GYVDGYIETI EETDSSAIDI DYHTAVDSEV GHVGGYTESS
601 EESNPIDFEE STHENSKHHA DVVEYEEDTN PGGGQVTTES NLVEFDEEST
= ========== ========== ==========
651 KGIVTGAVSD HTTIEDTKEY TTESNLIELV DELPEEHGQA QGPIEEITEN
701 NHHISHSGLG TENGHGNYGV IEEIEENSHV DIKSELGYEG GQNSGNQSFE
751 EDTEEDKPKY EQGGNIVDID FDSVPQIHGQ NKGDQSFEED TEKDKPKYEH
801 GGNIIDIDFD SVPQIHGFNK HNEIIEEDTN KDKPNYQFGG HNSVDFEEDT
851 LPKVSGQNEG QQTIEEDTTP PTPPTPEVPS EPETPMPPTP EVPSEPETPT
901 PPTPEVPSEP ETPTPPTPEV PSEPETPTPP TPEVPSEPET PTPPTPEVPA
951 EPGKPVPPAK EEPKKPSKPV EQGKVVTPVI EINEKVKAVA PTKKAQSKKS
1001 ELPETGGEES TNKGMLFGGL FSILGLALLR RNKKNNKA
HITS AT: 620-650
MF Unspecified
CI MAN
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L6 ANSWER 3 OF 6 REGISTRY COPYRIGHT 2001 ACS
RN 341089-09-6 REGISTRY
CN Fibronectin-binding protein (Staphylococcus aureus strain Mu50 gene fnbB)
(9CI) (CA INDEX NAME)
OTHER NAMES:
CN GenBank AP003365-derived protein GI 14248276
FS PROTEIN SEQUENCE
SQL 961

SEQ 1 MKSNLRYGIR KHKLGAASVF LGTMIVVGMG QEKEAAASEQ NNTTVEESGS
51 SATESKASET QTTTNNVNTI DETQSYSATS TEQPSKSTQV TTEEAPTTVQ
101 APKVETEMKS QEDLPSEKVA DKETTGTQVD IAQPSNVSEI KPRMKRSADV
151 TAVSEKEVAE EAKATGTDVT NKVEVTESSL EGHNKDSNIV NPHNAQRVTL
201 KYKWKFGEGI KAGDYFDFTL SDNVETHGIS TLRKVPEIKS STEDKVMANG
251 QVINERTIRY TFTDYINNKK DLTAELNLNL FIDPTTVTKQ GSQKVEVTLG
301 QNKVSKEFDI KYLDGVKDRM GVTVNGRIDT LNKEEGKFSH FAYVKPNNQS
351 LTSVTVTGQV TSGYKQSANN PTVKVYKHIG SDELAESVYA KLDDTSKFED
401 VTEKVNLSYT SNGGYTLNLG DLDNSKDYVI KYEGEYDQNA KDLNFRTHLS
451 GYHKYYPYYP YYPYYYPVQLT WNNGVAFYSN NAKGDGKDKP NDPIIEKSEP
501 IDLDIKSEPP VEKHELTGTI EESNDSKPID FEYHTAVEGA EGHAEGIIET

551 EEDSIHVDFE ESTHENSKHH ADVVEYEEDT NPGGGQVTTE SNLVEFDEES
========== ========== ==========
601 TKGIVTGAVS DHTTVEDTKE YTTESNLIEL VDELPEEHGQ AQGPIEEITE
=
651 NNHHISHSGL GTENGHGNYG VIDEIEENSH VDIKSELGYE GGQNSGNQSF
701 EEDTEEDKPK YEQGGNIVDI DFDSVPQIHG QNNGNQSFEE DTEEDKPKYE
751 QGGNIIDIDF DSVPQIHGFN KHNEIIEEDT NKDKPNYQFG GHNSVDFEED
801 TLPKVSGQNE GQQTIEEDTT PPTPPTPEVP SEPETPTPPT PEVPSEPGEP
851 TPPKPEVPSE PETPVPPTPE VPSEPGKPVP PAKEEPKKPS KPVEQGKVVT
901 PVIEINEKVK AVAPTKQKQS KKSELPETGG EESTNKGMLF GGLFSILGLV
951 LLRRNKKNNK A
HITS AT: 571-601
MF Unspecified
CI MAN
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L6 ANSWER 4 OF 6 REGISTRY COPYRIGHT 2001 ACS
RN 195127-37-8 REGISTRY
CN Protein (Staphylococcus aureus fibronectin/fibrinogen-binding open reading frame 54_6) (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE
SQL 1027

SEQ 1 ILHLKGDIIV KNNLRYGIRK HKLGAASVFL GTMIVVGMGQ DKEAAASEQK
51 TTTVEENGNS ATDNKTSETQ TTATNVNHIE ETQSYNATVT EQPSNATQVT
101 TEEAPKAVQA PQTAQPANIE TVKEEVVKEE AKPQVKETTQ SQDNSGDQRQ
151 VDLTPKKATQ NQVAETQVEV AQPRTASESK PRVTRSADVA EAKEASNAKV
201 ETGTDVTSKV TVEIGSIEGH NNTNKVEPHA GQRAVLKYKL KFENGLHQGD
251 YFDFTLSNNV NTHGVSTARK VPEIKNGSVV MATGEVLEGG KIRYTFTNDI
301 EDKVDVTAEL EINLFIDPKT VQTNGNQTIT STLNEEQTSK ELDVKYKDGI
351 GNYYANLNGS IETFNKANNR FSHVAFIKPN NGKTTSVTVT GTLMKGSNQN
401 GNQPKVRIFE YLGNNEDIAK SVYANTTDTS KFKEVTSNMS GNLNLQNNGS
451 YSLNIENLDK TYVVHYDGEY LNGTDEVDFR TQMVGHPEQL YKYYYDRGYT
501 LTWDNGLVLY SNKANGNEKN GPIIQNNKFE YKEDTIKETL TGQYDKNLVT
551 TVEEEYDSST LDIDYHTAID GGGGYVDGYI ETIEETDSSA IDIDYHTAVD
601 SEAGHVGGYT ESSEESNPID FEESTHENSK HHADVVEYEE DTNPGGGQVT
======== ==========
651 TESNLVEFDE ESTKGIVTGA VSDHTTVEDT KEYTTESNLI ELVDELPEEH
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701 GQAQGPVEEI TKNNHHISHS GLGTENGHGN YDVIEEIEEN SHVDIKSEKG
751 YEGGQNSGNQ SFEEDTEEDK PKYEQGGNIV DIDFDSVPQI HGQNKGNQSF
801 EEDTEKDKPK YEHGGNIIDI DFDSVPHIHG FNKHTEIIEE DTNKDKPSYQ
851 FGGHNSVDFE EDTLPKVSGQ NEGQQTIEED TTPPIVPPTP PTPEVPSEPE
901 TPTPPTPEVP SEPETPTPPT PEVPSEPETP TPPTPEVPAE PGKPVPPAKE
951 EPKKPSKPVE QGKVVTPVIE INEKVKAVAP TKKPQSKKSE LPETGGEEST
1001 NKGMLFGGLF SILGLALLRR NKKNHKA
HITS AT: 633-663
MF Unspecified
CI MAN
SR CA
LC STN Files: CA, CAPLUS, TOXLIT
1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L6 ANSWER 5 OF 6 REGISTRY COPYRIGHT 2001 ACS
RN 122784-68-3 REGISTRY
CN Protein FnBP (Staphylococcus aureus clone pFR001 precursor) (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE

SQL 1018

SEQ 1 VKNNLRYGIR KHKLGAASVF LGTMIVVGMG QDKEAAASEQ KTTTVEENGN
51 SATDNKTSET QTTATNVNHI EETRSYNATV TEQPSNATQV TTEEAPKAVQ
101 APQTAQPANI ETVKEEVVKE EAKPRVKETT QSQDNSGDQR QVDLTPKKAT
151 QNQVAETQVE VAQPRTASES KPRVTRSADV AEAKEASNAK VETGTDVTSK
201 VTVEIGSIEG HNNTNKVEPH AGQRAVLKYK LKFENGLHQG DYFDFTLSNN
251 VNTHGVSTAR KVPEIKNGSV VMATGEVLEG GKIRYTFTND IQDKVDVTAE
301 LEINLFIDPK TVQTNGNQTI TSTLNEEQTS KELDVKYKDG IGNYYANLNG
351 SIETFNKANN RFSHVAFIKP NNGKTTSVTV TGTLMKGSNQ NGNQPKVRIF
401 EYLGNNEDIA KSVYANTTDT SKFKEVTSNM SGNLNLQNNG SYSLNIENLD
451 KTYVVHYDGE YLNGTDEVDF RTQMVGHPEQ LYKYYYDRGY TLTWDNGLVL
501 YSNKANGNEK NGPIIQNNKF EYKEDTIKET LTGQYDKNLV TTVEEEYDSS
551 TLDIDYHTAI DGGGGYVDGY IETIEETDSS AIDIDYHTAV DSEAGHVGGY
601 TESSEESNPI DFEESTHENS KHHADVVEYE EDTNPGGGQV TTESNLVEFD
======= ========== ==========
651 EESTKGIVTG AVSDHTTVED TKEYTTESNL IELVDELPEE HGQAQGPVEE
====
701 ITKNNHHISH SGLGTENGHG NYDVIEEIEE NSHVDIKSEL GYEGGQNSGN
751 QSFEEDTEED KPKYEQGGNI VDIDFDSVPQ IHGQNKGNQS FEEDTEKDKP
801 KYEHGGNIID IDFDSVPHIH GFNKHTEIIE EDTNKDKPSY QFGGHNSVDF
851 EEDTLPKVSG QNEGQQTIEE DTTPPIVPPT PPTPEVPSEP ETPTPPTPEV
901 PSEPETPTPP TPEVPSEPET PTPPTPEVPA EPGKPVPPAK EEPKKPSKPV
951 EQGKVVTPVI EINEKVKAVA PTKKPQSKKS ELPETGGEES TNKGMLFGGL
1001 FSILGLALLR RNKKNHKA
HITS AT: 624-654
MF Unspecified
CI MAN
SR CA
LC STN Files: CA, CAPLUS, TOXLIT, USPATFULL
2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L6 ANSWER 6 OF 6 REGISTRY COPYRIGHT 2001 ACS
RN 122784-67-2 REGISTRY
CN Protein FnBP (Staphylococcus aureus clone pFR001) (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE
SQL 982

SEQ 1 ASEQKTTTVE ENGNSATDNK TSETQTTATN VNHIEETRSY NATVTEQPSN
51 ATQVTTEEAP KAVQAPQTAQ PANIETVKEE VVKEEAKPRV KETTQSQDNS
101 GDQRQVDLTP KKATQNQVAE TQVEVAQPRT ASESKPRVTR SADVAEAKEA
151 SNAKVETGTD VTSKVTVEIG SIEGHNNTNK VEPHAGQRAV LKYKLKFENG
201 LHQGDYFDFT LSNNVNTHGV STARKVPEIK NGSVVMATGE VLEGGKIRYT
251 FTNDIQDKVD VTAELEINLF IDPKTVQTNG NQTITSTLNE EQTSKELDVK
301 YKDGIGNYYA NLNGSIETFN KANNRFSHVA FIKPNNGKTT SVTVTGTLMK
351 GSNQNGNQPK VRIFEYLGNN EDIAKSVYAN TTDTSKFKEV TSNMSGNLNL
401 QNNGSYSLNI ENLDKTYVVH YDGEYLNGTD EVDFRTQMVG HPEQLYKYYY
451 DRGYTLTWDN GLVLYSNKAN GNEKNGPIIQ NNKFEYKEDT IKETLTGQYD
501 KNLVTTVEEE YDSSTLDIDY HTAIDGGGGY VDGYIETIEE TDSSAIDIDY
551 HTAVDSEAGH VGGYTESSEE SNPIDFEEST HENSKHHADV VEYEEDTNPG
=== ==========
601 GGQVTTESNL VEFDEESTKG IVTGAVSDHT TVEDTKEYTT ESNLIELVDE
========== ========
651 LPEEHGQAQG PVEEITKNNH HISHSGLGTE NGHGNYDVIE EIEENSHVDI
701 KSELGYEGGQ NSGNQSFEED TEEDKPKYEQ GGNIVDIDFD SVPQIHGQNK
751 GNQSFEEDTE KDKPKYEHGG NIIDIDFDSV PHIHGFNKHT EIIEEDTNKD
801 KPSYQFGGHN SVDFEEDTLP KVSGQNEGQQ TIEEDTTPPI VPPTPPTPEV
851 PSEPETPTPP TPEVPSEPET PTPPTPEVPS EPETPTPPTP EVPAEPGKPV
901 PPAKEEPKKP SKPVEQGKVV TPVIEINEKV KAVAPTKKPQ SKKSELPETG
951 GEESTNKGML FGGLFSILGL ALLRRNKKNH KA
HITS AT: 588-618

MF Unspecified
CI MAN
SR CA
LC STN Files: CA, CAPLUS, TOXLIT, USPATFULL
2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

SEQ ID NO: 5
=> s qnsgnqsfeedteedkpkyeqggnivdidfdsvpqihg/sqep

1 QNSGNQSFEEDTEEDKPKYEQGGNIVDIDFDSVPQIHG/SQEP
23669 SQL=38
L9 1 QNSGNQSFEEDTEEDKPKYEQGGNIVDIDFDSVPQIHG/SQEP
(QNSGNQSFEEDTEEDKPKYEQGGNIVDIDFDSVPQIHG/SQEP AND SQL=38)

=> d sqide

L9 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2001 ACS
RN 119977-17-2 REGISTRY
CN Glycine, L-glutaminyl-L-asparaginyl-L-serylglycyl-L-asparaginyl-L-glutaminyl-L-seryl-L-phenylalanyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-L-threonyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-L-lysyl-L-prolyl-L-lysyl-L-tyrosyl-L-.alpha.-glutamyl-L-glutaminylglycylglycyl-L-asparaginyl-L-isoleucyl-L-valyl-L-.alpha.-aspartyl-L-isoleucyl-L-.alpha.-aspartyl-L-phenylalanyl-L-.alpha.-aspartyl-L-seryl-L-valyl-L-prolyl-L-glutaminyl-L-isoleucyl-L-histidyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE
SQL ***38***

SEQ 1 QNSGNQSFEE DTEEDKPKYE QGGNIVDIDF DSVPQIHG
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HITS AT: 1-38
MF C181 H269 N49 O71
CI MAN
SR CA
LC STN Files: CA, CAPLUS, TOXLIT
3 REFERENCES IN FILE CA (1967 TO DATE)
3 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=> file caplus toxlit

=> s 119977-17-2/rn

'RN' IS NOT A VALID FIELD CODE
L10 3 119977-17-2/RN

=> d ibib ab 1-3

L10 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1997:97450 CAPLUS
DOCUMENT NUMBER: 126:210757
TITLE: Identification of D motif epitopes in Staphylococcus aureus fibronectin-binding protein for the production antibody inhibitors of fibronectin binding
AUTHOR(S): Sun, Qing; Smith, Gregory M.; Zahradka, Catherine; McGavin, Martin J.
CORPORATE SOURCE: Dep. Med. Microbiol., Univ. Manitoba, Winnipeg, MB, R3E 0W3, Can.
SOURCE: Infect. Immun. (1997), 65(2), 537-543
CODEN: INFIBR; ISSN: 0019-9567
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A fibronectin-binding protein (FnBP) adhesin of Staphylococcus aureus possesses three 37- or 38-amino-acid motifs (D1, D2, and D3) that can each

bind fibronectin (Fn) with low affinity and that in tandem comprise D1-3, a high-affinity Fn-binding domain. To identify epitopes for the generation of adhesion-blocking antibodies, rabbits were immunized with recombinant D1-3 or with a glutathione S-transferase fusion protein, GSTD1-3. Affinity-purified antibodies from the D1-3 immunization were poor inhibitors of Fn binding to S. aureus and recognized several different epitopes, with a preference for clusters of acidic amino acids that do not contribute to Fn binding. Antibodies generated with GSTD1-3 as an immunogen were more effective inhibitors, but concns. in excess of 20 .mu.g/mL did not promote more than 50% inhibition. These antibodies were highly specific for amino acids 21-34 of D1 (D121-34), which contain a sequence that is essential for Fn binding and are identical to D2 at 12 of 14 residues. Neither antibody prepn. recognized D320-33 of the D3 motif, where the only homol. to D121-34 and D221-34 comprises a sequence motif, GG(X3,4)(I/V)DF, that is crit. to Fn binding. However, antibodies specific for both D121-34 and D320-33 could be obtained by using synthetic peptides corresponding to these sequences as immunogens. F(ab')2 fragments derived from these antibodies each caused 40-50% inhibition of Fn binding to S. aureus, and their ability to bind to purified FnBP was eliminated by competing Fn. However, mixts. of the two F(ab')2 prepns. did not provide additive or synergistic inhibition of Fn binding. Therefore, inhibition of Fn binding to S. aureus requires antibodies specific for D121-34 and D320-33, but a mixt. of antibodies specific for both sequences did not provide complete inhibition.

L10 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1994:452661 CAPLUS
DOCUMENT NUMBER: 121:52661
TITLE: Interaction of N-terminal fragments of fibronectin with synthetic and recombinant D motifs from its binding protein on Staphylococcus aureus studied using fluorescence anisotropy
AUTHOR(S): Huff, Sheela; Matsuka, Yury V.; McGavin, Martin J.; Ingham, Kenneth C.
CORPORATE SOURCE: Holland Lab., Am. Red. Cross, Rockville, MD, 20855, USA
SOURCE: J. Biol. Chem. (1994), 269(22), 15563-70
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The N-terminal 29-kDa fragment of fibronectin (Fn29K) contains five type I "finger" modules. It binds to heparin, fibrin, and bacteria and is involved in fibronectin (Fn) matrix assembly. Binding to Staphylococcus aureus involves a cell wall-assocd. protein that contains .apprx.three repeats of a 38-residue D motif (Signas, C., Raucci, G., Jonsson, K., Lindgren, P.-E., Anantharamaiah, G. M., Hook, M., and Lindberg, M. (1989) Proc. Natl. Acad. Sci. U.S.A. 86, 699-703). Synthetic peptides representing D1, D2, and D3, when labeled with fluorescein isothiocyanate (FITC), exhibited increases in fluorescence anisotropy upon addn. of Fn29K but not other Fn fragments. The response could be reversed by titrn. with unlabeled peptides to yield inhibition consts. that agreed with the dissocn. consts. obtained by fitting the initial response. Values of Kd ranged between 2 and 12 .mu.M, with D3 having the highest affinity. Specificity of D3 for Fn29K was further illustrated by the fact that its C-terminal half (D3b, Lys801 to Lys821), when immobilized, selectively adsorbed Fn29K from a thermolysin digest of fibronectin. The binding site in Fn was further localized within Fn29K by analyzing smaller proteolytic or recombinant subfragments. Those contg. fingers, F3-5 and F4-5, were purified on D3b-Sepharose and bound FITC-D3b with Kd values of 4-6 .mu.m. Subfragments contg. pairs of fingers 1-2, 2-3, or single fingers 1, 4, or 5 were inactive. Whole D1-3, expressed in Escherichia coli and labeled with fluorescein, bound 1.9 mol/mol of Fn29K with Kd = 1.5 nM. F4-5 and

F2-3 bound with resp. Kd values of 0.35 and 4.4 .mu.M. These and other results indicate that binding of the individual D region peptides is mediated through their C-terminal halves, primarily to fingers 4 and 5 of fibronectin. The possible basis of the much higher affinity of D1-3 is discussed.

L10 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1989:609813 CAPLUS
DOCUMENT NUMBER: 111:209813
TITLE: Nucleotide sequence of the gene for a fibronectin-binding protein from Staphylococcus aureus: use of this peptide sequence in the synthesis of biologically active peptides
AUTHOR(S): Signaes, Christer; Raucci, Giuseppe; Joensson, Klas; Lindgren, Per Eric; Anantharamaiah, G. M.; Hoeoek, Magnus; Lindberg, Martin
CORPORATE SOURCE: Dep. Microbiol., Swed. Univ. Agric. Sci., Uppsala, S-750 07, Swed.
SOURCE: Proc. Natl. Acad. Sci. U. S. A. (1989), 86(2), 699-703
CODEN: PNASA6; ISSN: 0027-8424
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Binding of cells of S. aureus to fibronectin, which may present a mechanism of host tissue adherence, involves a fibronectin-receptor protein present on the bacterial surface. Cloning of a gene coding for a staphylococcal fibronectin-binding protein and construction of a fusion protein with fibronectin-binding properties were previously reported. The gene sequence and the deduced primary sequence of the fibronectin-binding protein were subsequently detd. The protein resembles other cell-wall-assocd. proteins on Gram-pos. bacteria in that it (i) appears to be anchored in the cell membrane via its C-terminal end, (ii) contains a proline-rich repeating unit outside the membrane anchor, and (iii) contains a long (36-amino acid) signal sequence at the N-terminus. The fibronectin-binding activity has been localized to a domain composed of a 38-amino acid unit repeated completely 3 times and partially a fourth time; the identity between the three 38-amino acid sequences varies from 42 to 87%. Three synthetic peptides mimicking the structure of each 38-amino acid unit were constructed. All 3 peptides interacted with fibronectin, as indicated by their ability to inhibit binding of fibronectin to staphylococcal cells, whereas an unrelated 37-amino acid peptide showed no inhibitory activity.

SEQ 7
=> s qnkgnqsfeedtekdkpkyehggniididfdsvphihg/sqep

1 QNKGNQSFEEDTEKDKPKYEHGGNIIDIDFDSVPHIHG/SQEP
23669 SQL=38
L13 1 QNKGNQSFEEDTEKDKPKYEHGGNIIDIDFDSVPHIHG/SQEP
(QNKGNQSFEEDTEKDKPKYEHGGNIIDIDFDSVPHIHG/SQEP AND SQL=38)

=> d sqide

L13 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2001 ACS
RN 119977-19-4 REGISTRY
CN Glycine, L-glutaminyl-L-asparaginyl-L-lysylglycyl-L-asparaginyl-L-glutaminyl-L-seryl-L-phenylalanyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-L-threonyl-L-.alpha.-glutamyl-L-lysyl-L-.alpha.-aspartyl-L-lysyl-L-prolyl-L-lysyl-L-tyrosyl-L-.alpha.-glutamyl-L-histidylglycylglycyl-L-asparaginyl-L-isoleucyl-L-isoleucyl-L-.alpha.-aspartyl-L-isoleucyl-L-.alpha.-aspartyl-L-phenylalanyl-L-.alpha.-aspartyl-L-seryl-L-valyl-L-prolyl-L-histidyl-L-isoleucyl-L-histidyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE
SQL ***38***

SEQ 1 QNKGNQSFEE DTEKDKPKYE HGGNIIDIDF DSVPHIHG
========== ========== ========== ========
HITS AT: 1-38
MF C188 H281 N53 O66
CI MAN
SR CA
LC STN Files: CA, CAPLUS, TOXLIT
2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=> file caplus

=> s 119977-19-4/rn

2 119977-19-4
0 119977-19-4D
L14 2 119977-19-4/RN
(119977-19-4 (NOTL) 119977-19-4D)

=> d ibib ab 1 2

L14 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1997:97450 CAPLUS
DOCUMENT NUMBER: 126:210757
TITLE: Identification of D motif epitopes in Staphylococcus aureus fibronectin-binding protein for the production antibody inhibitors of fibronectin binding
AUTHOR(S): Sun, Qing; Smith, Gregory M.; Zahradka, Catherine; McGavin, Martin J.
CORPORATE SOURCE: Dep. Med. Microbiol., Univ. Manitoba, Winnipeg, MB, R3E 0W3, Can.
SOURCE: Infect. Immun. (1997), 65(2), 537-543
CODEN: INFIBR; ISSN: 0019-9567
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A fibronectin-binding protein (FnBP) adhesin of Staphylococcus aureus possesses three 37- or 38-amino-acid motifs (D1, D2, and D3) that can each bind fibronectin (Fn) with low affinity and that in tandem comprise D1-3, a high-affinity Fn-binding domain. To identify epitopes for the generation of adhesion-blocking antibodies, rabbits were immunized with recombinant D1-3 or with a glutathione S-transferase fusion protein, GSTD1-3. Affinity-purified antibodies from the D1-3 immunization were poor inhibitors of Fn binding to S. aureus and recognized several different epitopes, with a preference for clusters of acidic amino acids that do not contribute to Fn binding. Antibodies generated with GSTD1-3 as an immunogen were more effective inhibitors, but concns. in excess of 20 .mu.g/mL did not promote more than 50% inhibition. These antibodies were highly specific for amino acids 21-34 of D1 (D121-34), which contain a sequence that is essential for Fn binding and are identical to D2 at 12 of 14 residues. Neither antibody prepn. recognized D320-33 of the D3 motif, where the only homol. to D121-34 and D221-34 comprises a sequence motif, GG(X3,4)(I/V)DF, that is crit. to Fn binding. However, antibodies specific for both D121-34 and D320-33 could be obtained by using synthetic peptides corresponding to these sequences as immunogens. F(ab')2 fragments derived from these antibodies each caused 40-50% inhibition of Fn binding to S. aureus, and their ability to bind to purified FnBP was eliminated by competing Fn. However, mixts. of the two F(ab')2 prepns. did not provide additive or synergistic inhibition of Fn binding. Therefore, inhibition of Fn binding to S. aureus requires antibodies specific for D121-34 and D320-33, but a mixt. of antibodies specific for both sequences did not provide complete inhibition.

L14 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1989:609813 CAPLUS
DOCUMENT NUMBER: 111:209813
TITLE: Nucleotide sequence of the gene for a fibronectin-binding protein from Staphylococcus aureus: use of this peptide sequence in the synthesis of biologically active peptides
AUTHOR(S): Signaes, Christer; Raucci, Giuseppe; Joensson, Klas; Lindgren, Per Eric; Anantharamaiah, G. M.; Hoeoek, Magnus; Lindberg, Martin
CORPORATE SOURCE: Dep. Microbiol., Swed. Univ. Agric. Sci., Uppsala, S-750 07, Swed.
SOURCE: Proc. Natl. Acad. Sci. U. S. A. (1989), 86(2), 699-703
CODEN: PNASA6; ISSN: 0027-8424
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Binding of cells of S. aureus to fibronectin, which may present a mechanism of host tissue adherence, involves a fibronectin-receptor protein present on the bacterial surface. Cloning of a gene coding for a staphylococcal fibronectin-binding protein and construction of a fusion protein with fibronectin-binding properties were previously reported. The gene sequence and the deduced primary sequence of the fibronectin-binding protein were subsequently detd. The protein resembles other cell-wall-assocd. proteins on Gram-pos. bacteria in that it (i) appears to be anchored in the cell membrane via its C-terminal end, (ii) contains a proline-rich repeating unit outside the membrane anchor, and (iii) contains a long (36-amino acid) signal sequence at the N-terminus. The fibronectin-binding activity has been localized to a domain composed of a 38-amino acid unit repeated completely 3 times and partially a fourth time; the identity between the three 38-amino acid sequences varies from 42 to 87%. Three synthetic peptides mimicking the structure of each 38-amino acid unit were constructed. All 3 peptides interacted with fibronectin, as indicated by their ability to inhibit binding of fibronectin to staphylococcal cells, whereas an unrelated 37-amino acid peptide showed no inhibitory activity.

SEQ ID NO: 9
=> s kpsyqfgghnsvdfeedtlpk/sqep

1 KPSYQFGGHNSVDFEEDTLPK/SQEP
50328 SQL=21
L17 1 KPSYQFGGHNSVDFEEDTLPK/SQEP
(KPSYQFGGHNSVDFEEDTLPK/SQEP AND SQL=21)

=> d sqide

L17 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2001 ACS
RN 142062-16-6 REGISTRY
CN L-Lysine, L-lysyl-L-prolyl-L-seryl-L-tyrosyl-L-glutaminyl-L-phenylalanylglycylglycyl-L-histidyl-L-asparaginyl-L-seryl-L-valyl-L-.alpha.-aspartyl-L-phenylalanyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-L-threonyl-L-leucyl-L-prolyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL ***21***

SEQ 1 KPSYQFGGHN SVDFEEDTLP K
========== ========== =
HITS AT: 1-21
MF C107 H155 N27 O36
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

=> file caplus

=> s 142062-16-6/rn

3 142062-16-6
0 142062-16-6D
L18 3 142062-16-6/RN
(142062-16-6 (NOTL) 142062-16-6D)

=> d ibib ab 1-3

L18 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:146776 CAPLUS
DOCUMENT NUMBER: 132:292413
TITLE: Synthetic peptide immunogens elicit polyclonal and monoclonal antibodies specific for linear epitopes in the D motifs of Staphylococcus aureus fibronectin-binding protein, which are composed of amino acids that are essential for fibronectin binding
AUTHOR(S): Huesca, Mario; Sun, Qing; Peralta, Robert; Shivji, Gulnar M.; Sauder, Daniel N.; McGavin, Martin J.
CORPORATE SOURCE: Divisions of Microbiology, Laboratory Medicine and Pathobiology, Sunnybrook and Women's College Health Sciences Centre, North York, ON, M4N 3M5, Can.
SOURCE: Infect. Immun. (2000), 68(3), 1156-1163
CODEN: INFIBR; ISSN: 0019-9567
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A fibronectin (Fn)-binding adhesin of Staphylococcus aureus contains three tandem 37- or 38-amino-acid motifs (D1, D2, and D3), which function to bind Fn. Plasma from patients with S. aureus infections contain antibodies that preferentially recognize ligand induced binding sites in the D motifs and do not inhibit Fn binding. To eliminate the influence of

Fn binding on antibody development, the authors used synthetic peptide immunogens D121-34 and D320-33, which each contain a conserved pattern of amino acids that is essential for Fn binding but which cannot bind Fn without N- or C-terminal extensions. The D320-33 immunogen promoted the prodn. of polyclonal antibodies that were 10-fold more effective as inhibitors of Fn-binding to the D3 motif than antibodies obtained by immunizing with an extended peptide D316-36, which exhibits functional Fn binding. The D320-33 immunogen also facilitated the prodn. of a monoclonal antibody, 9C3, which was highly specific for the epitope SVDFEED, and abolished Fn binding by the D3 motif. When mixed with polyclonal anti-D121-34 IgG, 70% inhibition of Fn binding to the three tandem D motifs was achieved compared to no more than 30% inhibition with either antibody prepn. alone. Therefore, by immunizing with short synthetic peptides that are unable to bind Fn, the authors have effectively stimulated the prodn. of antibodies specific for epitopes comprised of amino acids that are essential for Fn binding. Although these epitopes occur within a conserved pattern of amino acids that is required for Fn binding, the antibodies recognized specific linear epitope sequences and not a conserved structure common to all repeated motifs.

REFERENCE COUNT: 40
REFERENCE(S): (3) Balaban, N; Science 1998, V280, P438 CAPLUS
(4) Brennan, F; Vaccine 1999, V17, P1846 CAPLUS
(5) Casolini, F; Infect Immun 1998, V66, P5433 CAPLUS
(6) Fattom, A; Ann Med 1996, V28, P43 CAPLUS
(7) Fattom, A; Infect Immun 1996, V64, P1659 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1994:452661 CAPLUS
DOCUMENT NUMBER: 121:52661
TITLE: Interaction of N-terminal fragments of fibronectin with synthetic and recombinant D motifs from its binding protein on Staphylococcus aureus studied using fluorescence anisotropy
AUTHOR(S): Huff, Sheela; Matsuka, Yury V.; McGavin, Martin J.; Ingham, Kenneth C.
CORPORATE SOURCE: Holland Lab., Am. Red. Cross, Rockville, MD, 20855, USA
SOURCE: J. Biol. Chem. (1994), 269(22), 15563-70
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The N-terminal 29-kDa fragment of fibronectin (Fn29K) contains five type I "finger" modules. It binds to heparin, fibrin, and bacteria and is involved in fibronectin (Fn) matrix assembly. Binding to Staphylococcus aureus involves a cell wall-assocd. protein that contains .apprx.three repeats of a 38-residue D motif (Signas, C., Raucci, G., Jonsson, K., Lindgren, P.-E., Anantharamaiah, G. M., Hook, M., and Lindberg, M. (1989) Proc. Natl. Acad. Sci. U.S.A. 86, 699-703). Synthetic peptides representing D1, D2, and D3, when labeled with fluorescein isothiocyanate (FITC), exhibited increases in fluorescence anisotropy upon addn. of Fn29K but not other Fn fragments. The response could be reversed by titrn. with unlabeled peptides to yield inhibition consts. that agreed with the dissocn. consts. obtained by fitting the initial response. Values of Kd ranged between 2 and 12 .mu.M, with D3 having the highest affinity. Specificity of D3 for Fn29K was further illustrated by the fact that its C-terminal half (D3b, Lys801 to Lys821), when immobilized, selectively adsorbed Fn29K from a thermolysin digest of fibronectin. The binding site in Fn was further localized within Fn29K by analyzing smaller proteolytic or recombinant subfragments. Those contg. fingers, F3-5 and F4-5, were purified on D3b-Sepharose and bound FITC-D3b with Kd values of 4-6 .mu.m. Subfragments contg. pairs of fingers 1-2, 2-3, or single fingers 1, 4, or

5 were inactive. Whole D1-3, expressed in Escherichia coli and labeled with fluorescein, bound 1.9 mol/mol of Fn29K with Kd = 1.5 nM. F4-5 and F2-3 bound with resp. Kd values of 0.35 and 4.4 .mu.M. These and other results indicate that binding of the individual D region peptides is mediated through their C-terminal halves, primarily to fingers 4 and 5 of fibronectin. The possible basis of the much higher affinity of D1-3 is discussed.

L18 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1992:444088 CAPLUS
DOCUMENT NUMBER: 117:44088
TITLE: Chemically modified fibronectin-binding peptides and fragments
INVENTOR(S): Hoeoek, Magnus; McGavin, Martin; Raucci, Guiseppe
PATENT ASSIGNEE(S): Alfa-Laval Agri International AB, Swed.
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9202555	A1	19920220	WO 1991-SE534	19910809
W: AU, CA, FI, HU, JP, NO, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
CA 2067233	AA	19920211	CA 1991-2067233	19910809
AU 9184118	A1	19920302	AU 1991-84118	19910809
AU 632001	B2	19921210		
EP 504335	A1	19920923	EP 1991-914903	19910809
EP 504335	B1	19971210		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
HU 61035	A2	19921130	HU 1992-1211	19910809
HU 219261	B	20010328		
JP 05502046	T2	19930415	JP 1991-514015	19910809
AT 161018	E	19971215	AT 1991-914903	19910809
ES 2112862	T3	19980416	ES 1991-914903	19910809
FI 9201582	A	19920409	FI 1992-1582	19920409
NO 9201407	A	19920605	NO 1992-1407	19920409
US 5440014	A	19950808	US 1994-234622	19940428

PRIORITY APPLN. INFO.: SE 1990-2617 A 19900810
WO 1991-SE534 A 19910809
US 1992-846995 B1 19920608
US 1993-55783 B1 19930503
OTHER SOURCE(S): MARPAT 117:44088
AB Fibronectin-binding peptides R1-PSYQFGGHNSVDFEEDT-R2 (R1 = H, K, DK; R2 = OH, L, LP, LPK) are claimed. Synthetic peptides, peptide fragments, and chem. modified peptides derived from a Staphylococcus aureus fibronectin-binding protein homol. unit (D3) were prepd., and the activity of the peptides (ability to compete with S. aureus cells for binding to 125I-labeled fibronectin or fragment) was detd. The fibronectin-binding region of D3 was reduced to a 14-residue core peptide essential for activity but alone not sufficient to inhibit binding; addn. of a tripeptide to the amino-terminus or carboxy-terminus of this core peptide resulted in a dramatic recovery of activity. The fibronectin-binding peptides of the invention can be used for vaccination, wound healing,

L19 ANSWER 1 OF 1 USPATFULL
ACCESSION NUMBER: 95:71464 USPATFULL
TITLE: Fibronectin binding peptide

INVENTOR(S): Hook, Magnus, 129 Stevens Hill Cir., Birmingham, AL, United States 35244
McGavin, Martin, 1717 Beacon Crest Cir., Birmingham, AL, United States 35209
Raucci, Guiseppe, Via Tito Speri 10, I-00040 Pomezia, Rome, Italy

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5440014		19950808
APPLICATION INFO.:	US 1994-234622		19940428 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1993-55783, filed on 3 May 1993, now abandoned which is a continuation of Ser. No. US 1992-846995, filed on 8 Jun 1992, now abandoned

	NUMBER	DATE
PRIORITY INFORMATION:	SE 1990-2617	19900810

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Warden, Jill
ASSISTANT EXAMINER: Marshall, S. G.
LEGAL REPRESENTATIVE: Burns, Doane, Swecker & Mathis
NUMBER OF CLAIMS: 1
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6 Drawing Figure(s); 6 Drawing Page(s)
LINE COUNT: 679
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A fibronectin binding peptide having the structure R'-PSYQFGGHNS VDFEEDT-R.sup.2 wherein R' is hydrogen, K or DK, and R.sup.2 is hydroxy, L, LP or LPK is disclosed. The fibronectin binding proteins of the present invention may be used, for example, for vaccination of ruminants against mastitis caused by Staphylococcal infections, for the treatment of wounds, e.g., for blocking protein receptors or for immunization (vaccination) against infection by bacterial strains, and for diagnosis of bacterial infections caused by Staphylococci strains.

SEQ 60
=> s qggnivdidfdsvp/sqep

1 QGGNIVDIDFDSVP/SQEP
26675 SQL=14
L11 1 QGGNIVDIDFDSVP/SQEP
(QGGNIVDIDFDSVP/SQEP AND SQL=14)

=> d sqide

L11 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2001 ACS
RN 187102-34-7 REGISTRY
CN L-Proline, L-glutaminylglycylglycyl-L-asparaginyl-L-isoleucyl-L-valyl-L-.alpha.-aspartyl-L-isoleucyl-L-.alpha.-aspartyl-L-phenylalanyl-L-.alpha.-aspartyl-L-seryl-L-valyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL ***14***

SEQ 1 QGGNIVDIDF DSVP
========== ====
HITS AT: 1-14
MF C64 H98 N16 O24
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

2 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=> file caplus

=> s 187102-34-7/rn

2 187102-34-7
0 187102-34-7D
L12 2 187102-34-7/RN
(187102-34-7 (NOTL) 187102-34-7D)

=> d ibib ab 1 2

L12 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1998:509122 CAPLUS
DOCUMENT NUMBER: 129:148069
TITLE: Fibronectin binding protein compositions, antibodies thereto, and methods of use
INVENTOR(S): Hook, Magnus; Patti, Joseph M.; House-Pompeo, Karen L.; Speziale, Petro; Joh, Danny; McGavin, Martin J.
PATENT ASSIGNEE(S): The Texas A & M University System, USA
SOURCE: PCT Int. Appl., 201 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9831389	A2	19980723	WO 1998-US1222	19980121
WO 9831389	A3	19990121		

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,

DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

AU 9866479 A1 19980807 AU 1998-66479 19980121
EP 971740 A2 20000119 EP 1998-908439 19980121
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
PRIORITY APPLN. INFO.: US 1997-36139 19970121
WO 1998-US1222 19980121

AB Disclosed are antibodies that block the binding of fibronectin protein to fibronectin. Also disclosed are site specifically-mutated and truncated peptide epitopes derived from the fnbA and fnbB genes of Staphylococcus aureus, the fnbA and fnbB genes of Streptococcus dysgalactiae, and the sfb gene of Streptococcus pyogenes, and nucleic acid segments encoding these peptides and epitopes. The anti-(fibronectin binding site) antibodies, peptides and epitopes that give rise to antibodies that block the binding of fibronectin binding proteins to fibronectin, and DNA segments encoding these proteins and are of use in various screening, diagnostic and therapeutic applications including active and passive immunization and methods for the prevention of streptococcal and staphylococcal colonization in animals or humans. These DNA segments and the peptides derived therefrom are proposed to be of use directly in the prepn. of vaccines and also for use as carrier proteins in vaccine formulations.

L12 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1997:97450 CAPLUS
DOCUMENT NUMBER: 126:210757
TITLE: Identification of D motif epitopes in Staphylococcus aureus fibronectin-binding protein for the production antibody inhibitors of fibronectin binding
AUTHOR(S): Sun, Qing; Smith, Gregory M.; Zahradka, Catherine; McGavin, Martin J.
CORPORATE SOURCE: Dep. Med. Microbiol., Univ. Manitoba, Winnipeg, MB, R3E 0W3, Can.
SOURCE: Infect. Immun. (1997), 65(2), 537-543
CODEN: INFIBR; ISSN: 0019-9567
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A fibronectin-binding protein (FnBP) adhesin of Staphylococcus aureus possesses three 37- or 38-amino-acid motifs (D1, D2, and D3) that can each bind fibronectin (Fn) with low affinity and that in tandem comprise D1-3, a high-affinity Fn-binding domain. To identify epitopes for the generation of adhesion-blocking antibodies, rabbits were immunized with recombinant D1-3 or with a glutathione S-transferase fusion protein, GSTD1-3. Affinity-purified antibodies from the D1-3 immunization were poor inhibitors of Fn binding to S. aureus and recognized several different epitopes, with a preference for clusters of acidic amino acids that do not contribute to Fn binding. Antibodies generated with GSTD1-3 as an immunogen were more effective inhibitors, but concns. in excess of 20 .mu.g/mL did not promote more than 50% inhibition. These antibodies were highly specific for amino acids 21-34 of D1 (D121-34), which contain a sequence that is essential for Fn binding and are identical to D2 at 12 of 14 residues. Neither antibody prepn. recognized D320-33 of the D3 motif, where the only homol. to D121-34 and D221-34 comprises a sequence motif, GG(X3,4)(I/V)DF, that is crit. to Fn binding. However, antibodies specific for both D121-34 and D320-33 could be obtained by using synthetic peptides corresponding to these sequences as immunogens. F(ab')2

fragments derived from these antibodies each caused 40-50% inhibition of Fn binding to S. aureus, and their ability to bind to purified FnBP was eliminated by competing Fn. However, mixts. of the two F(ab')2 prepns. did not provide additive or synergistic inhibition of Fn binding. Therefore, inhibition of Fn binding to S. aureus requires antibodies specific for D121-34 and D320-33, but a mixt. of antibodies specific for both sequences did not provide complete inhibition.

SEQ 86
=> s vdfeedtlpkv/sqep

1 VDFEEDTLPKV/SQEP
28732 SQL=11
L18 1 VDFEEDTLPKV/SQEP
(VDFEEDTLPKV/SQEP AND SQL=11)

=> d sqide

L18 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2001 ACS
RN 187102-36-9 REGISTRY
CN L-Valine, L-valyl-L-.alpha.-aspartyl-L-phenylalanyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-L-threonyl-L-leucyl-L-prolyl-L-lysyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL ***11***

SEQ 1 VDFEEDTLPK V
========== =
HITS AT: 1-11
MF C58 H90 N12 O21
SR CA
LC STN Files: CA, CAPLUS

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=> file caplus

=> s 187102-36-9/rn

1 187102-36-9
0 187102-36-9D
L19 1 187102-36-9/RN
(187102-36-9 (NOTL) 187102-36-9D)

=> d ibib ab

L19 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1997:97450 CAPLUS
DOCUMENT NUMBER: 126:210757
TITLE: Identification of D motif epitopes in Staphylococcus aureus fibronectin-binding protein for the production antibody inhibitors of fibronectin binding
AUTHOR(S): Sun, Qing; Smith, Gregory M.; Zahradka, Catherine; McGavin, Martin J.
CORPORATE SOURCE: Dep. Med. Microbiol., Univ. Manitoba, Winnipeg, MB, R3E 0W3, Can.
SOURCE: Infect. Immun. (1997), 65(2), 537-543
CODEN: INFIBR; ISSN: 0019-9567
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A fibronectin-binding protein (FnBP) adhesin of Staphylococcus aureus possesses three 37- or 38-amino-acid motifs (D1, D2, and D3) that can each bind fibronectin (Fn) with low affinity and that in tandem comprise D1-3, a high-affinity Fn-binding domain. To identify epitopes for the generation of adhesion-blocking antibodies, rabbits were immunized with

recombinant D1-3 or with a glutathione S-transferase fusion protein, GSTD1-3. Affinity-purified antibodies from the D1-3 immunization were poor inhibitors of Fn binding to S. aureus and recognized several different epitopes, with a preference for clusters of acidic amino acids that do not contribute to Fn binding. Antibodies generated with GSTD1-3 as an immunogen were more effective inhibitors, but concns. in excess of 20 .mu.g/mL did not promote more than 50% inhibition. These antibodies were highly specific for amino acids 21-34 of D1 (D121-34), which contain a sequence that is essential for Fn binding and are identical to D2 at 12 of 14 residues. Neither antibody prepn. recognized D320-33 of the D3 motif, where the only homol. to D121-34 and D221-34 comprises a sequence motif, GG(X3,4)(I/V)DF, that is crit. to Fn binding. However, antibodies specific for both D121-34 and D320-33 could be obtained by using synthetic peptides corresponding to these sequences as immunogens. F(ab')2 fragments derived from these antibodies each caused 40-50% inhibition of Fn binding to S. aureus, and their ability to bind to purified FnBP was eliminated by competing Fn. However, mixts. of the two F(ab')2 prepns. did not provide additive or synergistic inhibition of Fn binding. Therefore, inhibition of Fn binding to S. aureus requires antibodies specific for D121-34 and D320-33, but a mixt. of antibodies specific for both sequences did not provide complete inhibition.

SEQ 87
ONLY 5 AMINO ACIDS!!!!!!!!!!!!! enablement as to functional language?????
=> s feedt/sqep

        0 FEEDT/SQEP
    44972 SQL=5
L22   0 FEEDT/SQEP
          (FEEDT/SQEP AND SQL=5)

=> s feedt/sqsp

L23   142 FEEDT/SQSP

=> s l23 and sql<10

    252831 SQL<10
L24   0 L23 AND SQL<10

=> s l23 and sql<15

    430429 SQL<15
L26   5 L23 AND SQL<15

=> d sqide 1-5

L26 ANSWER 1 OF 5 REGISTRY COPYRIGHT 2001 ACS
RN 264234-56-2 REGISTRY
CN L-Leucine, L-phenylalanylglycylglycyl-L-histidyl-L-asparaginyl-L-seryl-L-valyl-L-.alpha.-aspartyl-L-phenylalanyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-L-threonyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL ***14***

SEQ 1 FGGHNSVDFE EDTL
        == ===
HITS AT: 9-13
MF C68 H95 N17 O26
SR CA
LC STN Files: CA, CAPLUS

        1 REFERENCES IN FILE CA (1967 TO DATE)
        1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L26 ANSWER 2 OF 5 REGISTRY COPYRIGHT 2001 ACS
RN 187102-36-9 REGISTRY
CN L-Valine, L-valyl-L-.alpha.-aspartyl-L-phenylalanyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-L-threonyl-L-leucyl-L-prolyl-L-lysyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL ***11***

SEQ 1 VDFEEDTLPK V
      =====
HITS AT: 3-7
MF C58 H90 N12 O21
SR CA
LC STN Files: CA, CAPLUS

        1 REFERENCES IN FILE CA (1967 TO DATE)
        1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L26 ANSWER 3 OF 5 REGISTRY COPYRIGHT 2001 ACS
RN 187102-35-8 REGISTRY
CN L-Lysine, L-seryl-L-phenylalanyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-L-threonyl-L-.alpha.-glutamyl-L-lysyl-L-.alpha.-aspartyl-L-lysyl-L-prolyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL ***12***

SEQ 1 SFEEDTEKDK PK
=====
HITS AT: 2-6
MF C62 H97 N15 O25
SR CA
LC STN Files: CA, CAPLUS

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L26 ANSWER 4 OF 5 REGISTRY COPYRIGHT 2001 ACS
RN 187102-33-6 REGISTRY
CN L-Glutamic acid, L-seryl-L-phenylalanyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-L-threonyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-L-lysyl-L-prolyl-L-lysyl-L-tyrosyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL ***14***

SEQ 1 SFEEDTEEDK PKYE
=====
HITS AT: 2-6
MF C75 H108 N16 O32
SR CA
LC STN Files: CA, CAPLUS

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L26 ANSWER 5 OF 5 REGISTRY COPYRIGHT 2001 ACS
RN 142062-19-9 REGISTRY
CN L-Threonine, L-glutaminyl-L-phenylalanylglycylglycyl-L-histidyl-L-asparaginyl-L-seryl-L-valyl-L-.alpha.-aspartyl-L-phenylalanyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL ***14***

SEQ 1 QFGGHNSVDF EEDT
= ====
HITS AT: 10-14
MF C67 H92 N18 O27
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

3 REFERENCES IN FILE CA (1967 TO DATE)
3 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=> file caplus

=> s 264234-56-2/rn

1 264234-56-2
0 264234-56-2D

L27 1 264234-56-2/RN
(264234-56-2 (NOTL) 264234-56-2D)

=> d ibib ab

L27 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:146776 CAPLUS
DOCUMENT NUMBER: 132:292413
TITLE: Synthetic peptide immunogens elicit polyclonal and monoclonal antibodies specific for linear epitopes in the D motifs of Staphylococcus aureus fibronectin-binding protein, which are composed of amino acids that are essential for fibronectin binding
AUTHOR(S): Huesca, Mario; Sun, Qing; Peralta, Robert; Shivji, Gulnar M.; Sauder, Daniel N.; McGavin, Martin J.
CORPORATE SOURCE: Divisions of Microbiology, Laboratory Medicine and Pathobiology, Sunnybrook and Women's College Health Sciences Centre, North York, ON, M4N 3M5, Can.
SOURCE: Infect. Immun. (2000), 68(3), 1156-1163
CODEN: INFIBR; ISSN: 0019-9567
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A fibronectin (Fn)-binding adhesin of Staphylococcus aureus contains three tandem 37- or 38-amino-acid motifs (D1, D2, and D3), which function to bind Fn. Plasma from patients with S. aureus infections contain antibodies that preferentially recognize ligand induced binding sites in the D motifs and do not inhibit Fn binding. To eliminate the influence of Fn binding on antibody development, the authors used synthetic peptide immunogens D121-34 and D320-33, which each contain a conserved pattern of amino acids that is essential for Fn binding but which cannot bind Fn without N- or C-terminal extensions. The D320-33 immunogen promoted the prodn. of polyclonal antibodies that were 10-fold more effective as inhibitors of Fn-binding to the D3 motif than antibodies obtained by immunizing with an extended peptide D316-36, which exhibits functional Fn binding. The D320-33 immunogen also facilitated the prodn. of a monoclonal antibody, 9C3, which was highly specific for the epitope SVDFEED, and abolished Fn binding by the D3 motif. When mixed with polyclonal anti-D121-34 IgG, 70% inhibition of Fn binding to the three tandem D motifs was achieved compared to no more than 30% inhibition with either antibody prepn. alone. Therefore, by immunizing with short synthetic peptides that are unable to bind Fn, the authors have effectively stimulated the prodn. of antibodies specific for epitopes comprised of amino acids that are essential for Fn binding. Although these epitopes occur within a conserved pattern of amino acids that is required for Fn binding, the antibodies recognized specific linear epitope sequences and not a conserved structure common to all repeated motifs.
REFERENCE COUNT: 40
REFERENCE(S): (3) Balaban, N; Science 1998, V280, P438 CAPLUS
(4) Brennan, F; Vaccine 1999, V17, P1846 CAPLUS
(5) Casolini, F; Infect Immun 1998, V66, P5433 CAPLUS
(6) Fattom, A; Ann Med 1996, V28, P43 CAPLUS
(7) Fattom, A; Infect Immun 1996, V64, P1659 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s 187102-36-9/rn

1 187102-36-9
0 187102-36-9D
L28 1 187102-36-9/RN

(187102-36-9 (NOTL) 187102-36-9D)

=> d ibib ab

L28 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1997:97450 CAPLUS
DOCUMENT NUMBER: 126:210757
TITLE: Identification of D motif epitopes in Staphylococcus aureus fibronectin-binding protein for the production antibody inhibitors of fibronectin binding
AUTHOR(S): Sun, Qing; Smith, Gregory M.; Zahradka, Catherine; McGavin, Martin J.
CORPORATE SOURCE: Dep. Med. Microbiol., Univ. Manitoba, Winnipeg, MB, R3E 0W3, Can.
SOURCE: Infect. Immun. (1997), 65(2), 537-543
CODEN: INFIBR; ISSN: 0019-9567
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A fibronectin-binding protein (FnBP) adhesin of Staphylococcus aureus possesses three 37- or 38-amino-acid motifs (D1, D2, and D3) that can each bind fibronectin (Fn) with low affinity and that in tandem comprise D1-3, a high-affinity Fn-binding domain. To identify epitopes for the generation of adhesion-blocking antibodies, rabbits were immunized with recombinant D1-3 or with a glutathione S-transferase fusion protein, GSTD1-3. Affinity-purified antibodies from the D1-3 immunization were poor inhibitors of Fn binding to S. aureus and recognized several different epitopes, with a preference for clusters of acidic amino acids that do not contribute to Fn binding. Antibodies generated with GSTD1-3 as an immunogen were more effective inhibitors, but concns. in excess of 20 .mu.g/mL did not promote more than 50% inhibition. These antibodies were highly specific for amino acids 21-34 of D1 (D121-34), which contain a sequence that is essential for Fn binding and are identical to D2 at 12 of 14 residues. Neither antibody prepn. recognized D320-33 of the D3 motif, where the only homol. to D121-34 and D221-34 comprises a sequence motif, GG(X3,4)(I/V)DF, that is crit. to Fn binding. However, antibodies specific for both D121-34 and D320-33 could be obtained by using synthetic peptides corresponding to these sequences as immunogens. F(ab')2 fragments derived from these antibodies each caused 40-50% inhibition of Fn binding to S. aureus, and their ability to bind to purified FnBP was eliminated by competing Fn. However, mixts. of the two F(ab')2 prepns. did not provide additive or synergistic inhibition of Fn binding. Therefore, inhibition of Fn binding to S. aureus requires antibodies specific for D121-34 and D320-33, but a mixt. of antibodies specific for both sequences did not provide complete inhibition.

=> s 187102-35-8/rn

1 187102-35-8
0 187102-35-8D
L29 1 187102-35-8/RN
(187102-35-8 (NOTL) 187102-35-8D)

=> d ibib ab

L29 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1997:97450 CAPLUS
DOCUMENT NUMBER: 126:210757
TITLE: Identification of D motif epitopes in Staphylococcus

aureus fibronectin-binding protein for the production antibody inhibitors of fibronectin binding
AUTHOR(S): Sun, Qing; Smith, Gregory M.; Zahradka, Catherine; McGavin, Martin J.
CORPORATE SOURCE: Dep. Med. Microbiol., Univ. Manitoba, Winnipeg, MB, R3E 0W3, Can.
SOURCE: Infect. Immun. (1997), 65(2), 537-543
CODEN: INFIBR; ISSN: 0019-9567
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

=> s 187102-33-6/rn

1 187102-33-6
0 187102-33-6D
L30 1 187102-33-6/RN
(187102-33-6 (NOTL) 187102-33-6D)

=> d ibib ab

L30 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1997:97450 CAPLUS
DOCUMENT NUMBER: 126:210757
TITLE: Identification of D motif epitopes in Staphylococcus aureus fibronectin-binding protein for the production antibody inhibitors of fibronectin binding
AUTHOR(S): Sun, Qing; Smith, Gregory M.; Zahradka, Catherine; McGavin, Martin J.
CORPORATE SOURCE: Dep. Med. Microbiol., Univ. Manitoba, Winnipeg, MB, R3E 0W3, Can.
SOURCE: Infect. Immun. (1997), 65(2), 537-543
CODEN: INFIBR; ISSN: 0019-9567
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

=> s 142062-19-9/rn

3 142062-19-9
0 142062-19-9D
L31 3 142062-19-9/RN
(142062-19-9 (NOTL) 142062-19-9D)

=> d ibib ab 1-3

L31 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:146776 CAPLUS
DOCUMENT NUMBER: 132:292413
TITLE: Synthetic peptide immunogens elicit polyclonal and monoclonal antibodies specific for linear epitopes in the D motifs of Staphylococcus aureus fibronectin-binding protein, which are composed of amino acids that are essential for fibronectin binding
AUTHOR(S): Huesca, Mario; Sun, Qing; Peralta, Robert; Shivji, Gulnar M.; Sauder, Daniel N.; McGavin, Martin J.
CORPORATE SOURCE: Divisions of Microbiology, Laboratory Medicine and Pathobiology, Sunnybrook and Women's College Health Sciences Centre, North York, ON, M4N 3M5, Can.

SOURCE: Infect. Immun. (2000), 68(3), 1156-1163
CODEN: INFIBR; ISSN: 0019-9567
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A fibronectin (Fn)-binding adhesin of Staphylococcus aureus contains three tandem 37- or 38-amino-acid motifs (D1, D2, and D3), which function to bind Fn. Plasma from patients with S. aureus infections contain antibodies that preferentially recognize ligand induced binding sites in the D motifs and do not inhibit Fn binding. To eliminate the influence of Fn binding on antibody development, the authors used synthetic peptide immunogens D121-34 and D320-33, which each contain a conserved pattern of amino acids that is essential for Fn binding but which cannot bind Fn without N- or C-terminal extensions. The D320-33 immunogen promoted the prodn. of polyclonal antibodies that were 10-fold more effective as inhibitors of Fn-binding to the D3 motif than antibodies obtained by immunizing with an extended peptide D316-36, which exhibits functional Fn binding. The D320-33 immunogen also facilitated the prodn. of a monoclonal antibody, 9C3, which was highly specific for the epitope SVDFEED, and abolished Fn binding by the D3 motif. When mixed with polyclonal anti-D121-34 IgG, 70% inhibition of Fn binding to the three tandem D motifs was achieved compared to no more than 30% inhibition with either antibody prepn. alone. Therefore, by immunizing with short synthetic peptides that are unable to bind Fn, the authors have effectively stimulated the prodn. of antibodies specific for epitopes comprised of amino acids that are essential for Fn binding. Although these epitopes occur within a conserved pattern of amino acids that is required for Fn binding, the antibodies recognized specific linear epitope sequences and not a conserved structure common to all repeated motifs.
REFERENCE COUNT: 40
REFERENCE(S): (3) Balaban, N; Science 1998, V280, P438 CAPLUS
(4) Brennan, F; Vaccine 1999, V17, P1846 CAPLUS
(5) Casolini, F; Infect Immun 1998, V66, P5433 CAPLUS
(6) Fattom, A; Ann Med 1996, V28, P43 CAPLUS
(7) Fattom, A; Infect Immun 1996, V64, P1659 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1998:509122 CAPLUS
DOCUMENT NUMBER: 129:148069
TITLE: Fibronectin binding protein compositions, antibodies thereto, and methods of use
INVENTOR(S): Hook, Magnus; Patti, Joseph M.; House-Pompeo, Karen L.; Speziale, Petro; Joh, Danny; McGavin, Martin J.
PATENT ASSIGNEE(S): The Texas A & M University System, USA
SOURCE: PCT Int. Appl., 201 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9831389	A2	19980723	WO 1998-US1222	19980121
WO 9831389	A3	19990121		

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI,

FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

AU 9866479 A1 19980807 AU 1998-66479 19980121

EP 971740 A2 20000119 EP 1998-908439 19980121

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

PRIORITY APPLN. INFO.: US 1997-36139 19970121

WO 1998-US1222 19980121

AB Disclosed are antibodies that block the binding of fibronectin protein to fibronectin. Also disclosed are site specifically-mutated and truncated peptide epitopes derived from the fnbA and fnbB genes of Staphylococcus aureus, the fnbA and fnbB genes of Streptococcus dysgalactiae, and the sfb gene of Streptococcus pyogenes, and nucleic acid segments encoding these peptides and epitopes. The anti-(fibronectin binding site) antibodies, peptides and epitopes that give rise to antibodies that block the binding of fibronectin binding proteins to fibronectin, and DNA segments encoding these proteins and are of use in various screening, diagnostic and therapeutic applications including active and passive immunization and methods for the prevention of streptococcal and staphylococcal colonization in animals or humans. These DNA segments and the peptides derived therefrom are proposed to be of use directly in the prepn. of vaccines and also for use as carrier proteins in vaccine formulations.

L31 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1992:444088 CAPLUS

DOCUMENT NUMBER: 117:44088

TITLE: Chemically modified fibronectin-binding peptides and fragments

INVENTOR(S): Hoeoek, Magnus; McGavin, Martin; Raucci, Guiseppe

PATENT ASSIGNEE(S): Alfa-Laval Agri International AB, Swed.

SOURCE: PCT Int. Appl., 32 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9202555	A1	19920220	WO 1991-SE534	19910809
W: AU, CA, FI, HU, JP, NO, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
CA 2067233	AA	19920211	CA 1991-2067233	19910809
AU 9184118	A1	19920302	AU 1991-84118	19910809
AU 632001	B2	19921210		
EP 504335	A1	19920923	EP 1991-914903	19910809
EP 504335	B1	19971210		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
HU 61035	A2	19921130	HU 1992-1211	19910809
HU 219261	B	20010328		
JP 05502046	T2	19930415	JP 1991-514015	19910809
AT 161018	E	19971215	AT 1991-914903	19910809
ES 2112862	T3	19980416	ES 1991-914903	19910809
FI 9201582	A	19920409	FI 1992-1582	19920409
NO 9201407	A	19920605	NO 1992-1407	19920409
US 5440014	A	19950808	US 1994-234622	19940428

PRIORITY APPLN. INFO.: SE 1990-2617 A 19900810

WO 1991-SE534 A 19910809

US 1992-846995 B1 19920608

US 1993-55783 B1 19930503

OTHER SOURCE(S): MARPAT 117:44088

AB Fibronectin-binding peptides R1-PSYQFGGHNSVDFEEDT-R2 (R1 = H, K, DK; R2 =

OH, L, LP, LPK) are claimed. Synthetic peptides, peptide fragments, and chem. modified peptides derived from a Staphylococcus aureus fibronectin-binding protein homol. unit (D3) were prepd., and the activity of the peptides (ability to compete with S. aureus cells for binding to 125I-labeled fibronectin or fragment) was detd. The fibronectin-binding region of D3 was reduced to a 14-residue core peptide essential for activity but alone not sufficient to inhibit binding; addn. of a tripeptide to the amino-terminus or carboxy-terminus of this core peptide resulted in a dramatic recovery of activity. The fibronectin-binding peptides of the invention can be used for vaccination, wound healing, blocking protein receptors, or for an ELISA.

SEQ 103

=> s hggniididfdsvp/sqep

0 HGGNIIDIDFDSVP/SQEP
26675 SQL=14
L32 0 HGGNIIDIDFDSVP/SQEP
(HGGNIIDIDFDSVP/SQEP AND SQL=14)

=> s hggniididfdsvp/sqsp

L33 19 HGGNIIDIDFDSVP/SQSP

=> s l33 and sql<25

867298 SQL<25
L35 1 L33 AND SQL<25

=> d sqide

L35 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2001 ACS
RN 155970-96-0 REGISTRY
CN Glycine, L-lysyl-L-tyrosyl-L-.alpha.-glutamyl-L-histidylglycylglycyl-L-asparaginyl-L-isoleucyl-L-isoleucyl-L-.alpha.-aspartyl-L-isoleucyl-L-.alpha.-aspartyl-L-phenylalanyl-L-.alpha.-aspartyl-L-seryl-L-valyl-L-prolyl-L-histidyl-L-isoleucyl-L-histidyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL ***21***

SEQ 1 KYEHGGNIID IDFDSVPHIH G
======= =======
HITS AT: 4-17
MF C106 H155 N29 O33
SR CA
LC STN Files: CA, CAPLUS

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=> file caplus

=> s 155970-96-0/rn

1 155970-96-0
0 155970-96-0D
L38 1 155970-96-0/RN
(155970-96-0 (NOTL) 155970-96-0D)

=> d ibib ab

L38 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1994:452661 CAPLUS
DOCUMENT NUMBER: 121:52661
TITLE: Interaction of N-terminal fragments of fibronectin with synthetic and recombinant D motifs from its binding protein on Staphylococcus aureus studied using fluorescence anisotropy
AUTHOR(S): Huff, Sheela; Matsuka, Yury V.; McGavin, Martin J.;

Ingham, Kenneth C.
CORPORATE SOURCE: Holland Lab., Am. Red. Cross, Rockville, MD, 20855, USA
SOURCE: J. Biol. Chem. (1994), 269(22), 15563-70
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The N-terminal 29-kDa fragment of fibronectin (Fn29K) contains five type I "finger" modules. It binds to heparin, fibrin, and bacteria and is involved in fibronectin (Fn) matrix assembly. Binding to Staphylococcus aureus involves a cell wall-assocd. protein that contains .apprx.three repeats of a 38-residue D motif (Signas, C., Raucci, G., Jonsson, K., Lindgren, P.-E., Anantharamaiah, G. M., Hook, M., and Lindberg, M. (1989) Proc. Natl. Acad. Sci. U.S.A. 86, 699-703). Synthetic peptides representing D1, D2, and D3, when labeled with fluorescein isothiocyanate (FITC), exhibited increases in fluorescence anisotropy upon addn. of Fn29K but not other Fn fragments. The response could be reversed by titrn. with unlabeled peptides to yield inhibition consts. that agreed with the dissocn. consts. obtained by fitting the initial response. Values of Kd ranged between 2 and 12 .mu.M, with D3 having the highest affinity. Specificity of D3 for Fn29K was further illustrated by the fact that its C-terminal half (D3b, Lys801 to Lys821), when immobilized, selectively adsorbed Fn29K from a thermolysin digest of fibronectin. The binding site in Fn was further localized within Fn29K by analyzing smaller proteolytic or recombinant subfragments. Those contg. fingers, F3-5 and F4-5, were purified on D3b-Sepharose and bound FITC-D3b with Kd values of 4-6 .mu.m. Subfragments contg. pairs of fingers 1-2, 2-3, or single fingers 1, 4, or 5 were inactive. Whole D1-3, expressed in Escherichia coli and labeled with fluorescein, bound 1.9 mol/mol of Fn29K with Kd = 1.5 nM. F4-5 and F2-3 bound with resp. Kd values of 0.35 and 4.4 .mu.M. These and other results indicate that binding of the individual D region peptides is mediated through their C-terminal halves, primarily to fingers 4 and 5 of fibronectin. The possible basis of the much higher affinity of D1-3 is discussed.

SEQ 104

=> s svdfeedt/sqep

0 SVDFEEDT/SQEP
36664 SQL=8
L39 0 SVDFEEDT/SQEP
(SVDFEEDT/SQEP AND SQL=8)

=> s svdfeedt/sqsp

L40 43 SVDFEEDT/SQSP

=> s l40 and sql<20

642596 SQL<20
L41 10 L40 AND SQL<20

=> d sqide 1-10

L41 ANSWER 1 OF 10 REGISTRY COPYRIGHT 2001 ACS
RN 264234-56-2 REGISTRY
CN L-Leucine, L-phenylalanylglycylglycyl-L-histidyl-L-asparaginyl-L-seryl-L-valyl-L-.alpha.-aspartyl-L-phenylalanyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-L-threonyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL ***14***

SEQ 1 FGGHNSVDFE EDTL
===== ===
HITS AT: 6-13
MF C68 H95 N17 O26
SR CA
LC STN Files: CA, CAPLUS

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L41 ANSWER 2 OF 10 REGISTRY COPYRIGHT 2001 ACS
RN 142372-45-0 REGISTRY
CN L-Proline, L-prolyl-L-seryl-L-tyrosyl-L-glutaminyl-L-phenylalanylglycylglycyl-L-histidyl-L-asparaginyl-L-seryl-L-valyl-L-.alpha.-aspartyl-L-phenylalanyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-L-threonyl-L-leucyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL ***19***

SEQ 1 PSYQFGGHNS VDFEEDTLP
= =======
HITS AT: 10-17
MF C95 H131 N23 O34
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L41 ANSWER 3 OF 10 REGISTRY COPYRIGHT 2001 ACS
RN 142083-43-0 REGISTRY
CN L-Threonine, L-.alpha.-aspartyl-L-lysyl-L-prolyl-L-seryl-L-tyrosyl-L-glutaminyl-L-phenylalanylglycylglycyl-L-histidyl-L-asparaginyl-L-seryl-L-

valyl-L-.alpha.-aspartyl-L-phenylalanyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL ***19***

SEQ 1 DKPSYQFGGH NSVDFEEDT
========
HITS AT: 12-19
MF C94 H130 N24 O36
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L41 ANSWER 4 OF 10 REGISTRY COPYRIGHT 2001 ACS
RN 142083-41-8 REGISTRY
CN L-Leucine, L-lysyl-L-prolyl-L-seryl-L-tyrosyl-L-glutaminyl-L-phenylalanylglycylglycyl-L-histidyl-L-asparaginyl-L-seryl-L-valyl-L-.alpha.-aspartyl-L-phenylalanyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-L-threonyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL ***19***

SEQ 1 KPSYQFGGHN SVDFEEDTL
========
HITS AT: 11-18
MF C96 H136 N24 O34
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L41 ANSWER 5 OF 10 REGISTRY COPYRIGHT 2001 ACS
RN 142083-40-7 REGISTRY
CN L-Threonine, L-lysyl-L-prolyl-L-seryl-L-tyrosyl-L-glutaminyl-L-phenylalanylglycylglycyl-L-histidyl-L-asparaginyl-L-seryl-L-valyl-L-.alpha.-aspartyl-L-phenylalanyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL ***18***

SEQ 1 KPSYQFGGHN SVDFEEDT
========
HITS AT: 11-18
MF C90 H125 N23 O33
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L41 ANSWER 6 OF 10 REGISTRY COPYRIGHT 2001 ACS
RN 142083-38-3 REGISTRY
CN L-Leucine, L-prolyl-L-seryl-L-tyrosyl-L-glutaminyl-L-phenylalanylglycylglycyl-L-histidyl-L-asparaginyl-L-seryl-L-valyl-L-.alpha.-aspartyl-L-phenylalanyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-L-threonyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL ***18***

SEQ 1 PSYQFGGHNS VDFEEDTL
= =======
HITS AT: 10-17
MF C90 H124 N22 O33
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L41 ANSWER 7 OF 10 REGISTRY COPYRIGHT 2001 ACS
RN 142062-20-2 REGISTRY
CN L-Lysine, L-phenylalanylglycylglycyl-L-histidyl-L-asparaginyl-L-seryl-L-valyl-L-.alpha.-aspartyl-L-phenylalanyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-L-threonyl-L-leucyl-L-prolyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL ***16***

SEQ 1 FGGHNSVDFE EDTLPK
===== ===
HITS AT: 6-13
MF C79 H114 N20 O28
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L41 ANSWER 8 OF 10 REGISTRY COPYRIGHT 2001 ACS
RN 142062-19-9 REGISTRY
CN L-Threonine, L-glutaminyl-L-phenylalanylglycylglycyl-L-histidyl-L-asparaginyl-L-seryl-L-valyl-L-.alpha.-aspartyl-L-phenylalanyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL ***14***

SEQ 1 QFGGHNSVDF EEDT
==== ====
HITS AT: 7-14
MF C67 H92 N18 O27
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

3 REFERENCES IN FILE CA (1967 TO DATE)
3 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L41 ANSWER 9 OF 10 REGISTRY COPYRIGHT 2001 ACS
RN 142062-18-8 REGISTRY
CN L-Lysine, L-glutaminyl-L-phenylalanylglycylglycyl-L-histidyl-L-asparaginyl-L-seryl-L-valyl-L-.alpha.-aspartyl-L-phenylalanyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-L-threonyl-L-leucyl-L-prolyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL ***17***

SEQ 1 QFGGHNSVDF EEDTLPK
==== ====
HITS AT: 7-14
MF C84 H122 N22 O30
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L41 ANSWER 10 OF 10 REGISTRY COPYRIGHT 2001 ACS
RN 142062-17-7 REGISTRY
CN L-Threonine, L-prolyl-L-seryl-L-tyrosyl-L-glutaminyl-L-phenylalanylglycylglycyl-L-histidyl-L-asparaginyl-L-seryl-L-valyl-L-.alpha.-aspartyl-L-phenylalanyl-L-.alpha.-glutamyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl- (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE; STEREOSEARCH
SQL ***17***

SEQ 1 PSYQFGGHNS VDFEEDT
= =======
HITS AT: 10-17
MF C84 H113 N21 O32
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=> file caplus uspatfull

=> s 264234-56-2/rn

L42 1 264234-56-2/RN

=> d ibib ab

L42 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:146776 CAPLUS
DOCUMENT NUMBER: 132:292413
TITLE: Synthetic peptide immunogens elicit polyclonal and monoclonal antibodies specific for linear epitopes in the D motifs of Staphylococcus aureus fibronectin-binding protein, which are composed of amino acids that are essential for fibronectin binding
AUTHOR(S): Huesca, Mario; Sun, Qing; Peralta, Robert; Shivji, Gulnar M.; Sauder, Daniel N.; McGavin, Martin J.
CORPORATE SOURCE: Divisions of Microbiology, Laboratory Medicine and Pathobiology, Sunnybrook and Women's College Health Sciences Centre, North York, ON, M4N 3M5, Can.
SOURCE: Infect. Immun. (2000), 68(3), 1156-1163
CODEN: INFIBR; ISSN: 0019-9567
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A fibronectin (Fn)-binding adhesin of Staphylococcus aureus contains three tandem 37- or 38-amino-acid motifs (D1, D2, and D3), which function to bind Fn. Plasma from patients with S. aureus infections contain antibodies that preferentially recognize ligand induced binding sites in the D motifs and do not inhibit Fn binding. To eliminate the influence of Fn binding on antibody development, the authors used synthetic peptide immunogens D121-34 and D320-33, which each contain a conserved pattern of amino acids that is essential for Fn binding but which cannot bind Fn without N- or C-terminal extensions. The D320-33 immunogen promoted the prodn. of polyclonal antibodies that were 10-fold more effective as inhibitors of Fn-binding to the D3 motif than antibodies obtained by

immunizing with an extended peptide D316-36, which exhibits functional Fn binding. The D320-33 immunogen also facilitated the prodn. of a monoclonal antibody, 9C3, which was highly specific for the epitope SVDFEED, and abolished Fn binding by the D3 motif. When mixed with polyclonal anti-D121-34 IgG, 70% inhibition of Fn binding to the three tandem D motifs was achieved compared to no more than 30% inhibition with either antibody prepn. alone. Therefore, by immunizing with short synthetic peptides that are unable to bind Fn, the authors have effectively stimulated the prodn. of antibodies specific for epitopes comprised of amino acids that are essential for Fn binding. Although these epitopes occur within a conserved pattern of amino acids that is required for Fn binding, the antibodies recognized specific linear epitope sequences and not a conserved structure common to all repeated motifs.
REFERENCE COUNT: 40
REFERENCE(S): (3) Balaban, N; Science 1998, V280, P438 CAPLUS
(4) Brennan, F; Vaccine 1999, V17, P1846 CAPLUS
(5) Casolini, F; Infect Immun 1998, V66, P5433 CAPLUS
(6) Fattom, A; Ann Med 1996, V28, P43 CAPLUS
(7) Fattom, A; Infect Immun 1996, V64, P1659 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s (142372-45-0 or 142083-43-0 or 142083-41-8 or 142083-40-7 or 142083-38-3)/rn

L43 2 (142372-45-0 OR 142083-43-0 OR 142083-41-8 OR 142083-40-7 OR 142083-38-3)/RN

=> d ibib ab hit 1 2

L43 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1992:444088 CAPLUS
DOCUMENT NUMBER: 117:44088
TITLE: Chemically modified fibronectin-binding peptides and fragments
INVENTOR(S): Hoeoek, Magnus; McGavin, Martin; Raucci, Guiseppe
PATENT ASSIGNEE(S): Alfa-Laval Agri International AB, Swed.
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9202555	A1	19920220	WO 1991-SE534	19910809
W: AU, CA, FI, HU, JP, NO, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
CA 2067233	AA	19920211	CA 1991-2067233	19910809
AU 9184118	A1	19920302	AU 1991-84118	19910809
AU 632001	B2	19921210		
EP 504335	A1	19920923	EP 1991-914903	19910809
EP 504335	B1	19971210		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
HU 61035	A2	19921130	HU 1992-1211	19910809
HU 219261	B	20010328		
JP 05502046	T2	19930415	JP 1991-514015	19910809
AT 161018	E	19971215	AT 1991-914903	19910809
ES 2112862	T3	19980416	ES 1991-914903	19910809
FI 9201582	A	19920409	FI 1992-1582	19920409
NO 9201407	A	19920605	NO 1992-1407	19920409

US 5440014 A 19950808 US 1994-234622 19940428
PRIORITY APPLN. INFO.: SE 1990-2617 A 19900810
WO 1991-SE534 A 19910809
US 1992-846995 B1 19920608
US 1993-55783 B1 19930503
OTHER SOURCE(S): MARPAT 117:44088
AB Fibronectin-binding peptides R1-PSYQFGGHNSVDFEEDT-R2 (R1 = H, K, DK; R2 = OH, L, LP, LPK) are claimed. Synthetic peptides, peptide fragments, and chem. modified peptides derived from a Staphylococcus aureus fibronectin-binding protein homol. unit (D3) were prepd., and the activity of the peptides (ability to compete with S. aureus cells for binding to 125I-labeled fibronectin or fragment) was detd. The fibronectin-binding region of D3 was reduced to a 14-residue core peptide essential for activity but alone not sufficient to inhibit binding; addn. of a tripeptide to the amino-terminus or carboxy-terminus of this core peptide resulted in a dramatic recovery of activity. The fibronectin-binding peptides of the invention can be used for vaccination, wound healing, blocking protein receptors, or for an ELISA.
IT ***142083-38-3*** 142083-39-4 ***142083-40-7*** ***142083-41-8*** 142083-42-9 ***142083-43-0*** 142083-44-1 142083-45-2 142083-46-3 ***142372-45-0***
RL: ANST (Analytical study)
(fibronectin binding peptide amino acid sequence)

L43 ANSWER 2 OF 2 USPATFULL
ACCESSION NUMBER: 95:71464 USPATFULL
TITLE: Fibronectin binding peptide
INVENTOR(S): Hook, Magnus, 129 Stevens Hill Cir., Birmingham, AL, United States 35244
McGavin, Martin, 1717 Beacon Crest Cir., Birmingham, AL, United States 35209
Raucci, Guiseppe, Via Tito Speri 10, I-00040 Pomezia, Rome, Italy

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5440014		19950808
APPLICATION INFO.:	US 1994-234622		19940428 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1993-55783, filed on 3 May 1993, now abandoned which is a continuation of Ser. No. US 1992-846995, filed on 8 Jun 1992, now abandoned

	NUMBER	DATE
PRIORITY INFORMATION:	SE 1990-2617	19900810

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Warden, Jill
ASSISTANT EXAMINER: Marshall, S. G.
LEGAL REPRESENTATIVE: Burns, Doane, Swecker & Mathis
NUMBER OF CLAIMS: 1
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6 Drawing Figure(s); 6 Drawing Page(s)
LINE COUNT: 679
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A fibronectin binding peptide having the structure R'-PSYQFGGHNS VDFEEDT-R.sup.2 wherein R' is hydrogen, K or DK, and R.sup.2 is hydroxy, L, LP or LPK is disclosed. The fibronectin binding proteins of the present invention may be used, for example, for vaccination of ruminants against mastitis caused by Staphylococcal infections, for the treatment of wounds, e.g., for blocking protein receptors or for immunization (vaccination) against infection by bacterial strains, and for diagnosis

of bacterial infections caused by Staphylococci strains.
IT ***142083-38-3*** 142083-39-4 ***142083-40-7***
142083-41-8 142083-42-9 ***142083-43-0*** 142083-44-1
142083-45-2 142083-46-3 ***142372-45-0***
(fibronectin binding peptide amino acid sequence)

=> s (142062-20-2 or 142062-19-9 or 142062-18-8 or 142062-17-7)/rn

L44 4 (142062-20-2 OR 142062-19-9 OR 142062-18-8 OR 142062-17-7)/RN

=> d ibib ab hit 1-4

L44 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:146776 CAPLUS
DOCUMENT NUMBER: 132:292413
TITLE: Synthetic peptide immunogens elicit polyclonal and monoclonal antibodies specific for linear epitopes in the D motifs of Staphylococcus aureus fibronectin-binding protein, which are composed of amino acids that are essential for fibronectin binding
AUTHOR(S): Huesca, Mario; Sun, Qing; Peralta, Robert; Shivji, Gulnar M.; Sauder, Daniel N.; McGavin, Martin J.
CORPORATE SOURCE: Divisions of Microbiology, Laboratory Medicine and Pathobiology, Sunnybrook and Women's College Health Sciences Centre, North York, ON, M4N 3M5, Can.
SOURCE: Infect. Immun. (2000), 68(3), 1156-1163
CODEN: INFIBR; ISSN: 0019-9567
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A fibronectin (Fn)-binding adhesin of Staphylococcus aureus contains three tandem 37- or 38-amino-acid motifs (D1, D2, and D3), which function to bind Fn. Plasma from patients with S. aureus infections contain antibodies that preferentially recognize ligand induced binding sites in the D motifs and do not inhibit Fn binding. To eliminate the influence of Fn binding on antibody development, the authors used synthetic peptide immunogens D121-34 and D320-33, which each contain a conserved pattern of amino acids that is essential for Fn binding but which cannot bind Fn without N- or C-terminal extensions. The D320-33 immunogen promoted the prodn. of polyclonal antibodies that were 10-fold more effective as inhibitors of Fn-binding to the D3 motif than antibodies obtained by immunizing with an extended peptide D316-36, which exhibits functional Fn binding. The D320-33 immunogen also facilitated the prodn. of a monoclonal antibody, 9C3, which was highly specific for the epitope SVDFEED, and abolished Fn binding by the D3 motif. When mixed with polyclonal anti-D121-34 IgG, 70% inhibition of Fn binding to the three tandem D motifs was achieved compared to no more than 30% inhibition with either antibody prepn. alone. Therefore, by immunizing with short synthetic peptides that are unable to bind Fn, the authors have effectively stimulated the prodn. of antibodies specific for epitopes comprised of amino acids that are essential for Fn binding. Although these epitopes occur within a conserved pattern of amino acids that is required for Fn binding, the antibodies recognized specific linear epitope sequences and not a conserved structure common to all repeated motifs.
REFERENCE COUNT: 40
REFERENCE(S): (3) Balaban, N; Science 1998, V280, P438 CAPLUS
(4) Brennan, F; Vaccine 1999, V17, P1846 CAPLUS
(5) Casolini, F; Infect Immun 1998, V66, P5433 CAPLUS
(6) Fattom, A; Ann Med 1996, V28, P43 CAPLUS
(7) Fattom, A; Infect Immun 1996, V64, P1659 CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT 142062-16-6 ***142062-19-9*** 264234-56-2
RL: BAC (Biological activity or effector, except adverse); PRP (Properties); BIOL (Biological study)
(peptide immunogens elicit polyclonal and monoclonal antibodies that inhibit fibronectin-binding protein of Staphylococcus aureus)

L44 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1998:509122 CAPLUS
DOCUMENT NUMBER: 129:148069
TITLE: Fibronectin binding protein compositions, antibodies thereto, and methods of use
INVENTOR(S): Hook, Magnus; Patti, Joseph M.; House-Pompeo, Karen L.; Speziale, Petro; Joh, Danny; McGavin, Martin J.
PATENT ASSIGNEE(S): The Texas A & M University System, USA
SOURCE: PCT Int. Appl., 201 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9831389	A2	19980723	WO 1998-US1222	19980121
WO 9831389	A3	19990121		

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

AU 9866479	A1	19980807	AU 1998-66479	19980121
EP 971740	A2	20000119	EP 1998-908439	19980121

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

PRIORITY APPLN. INFO.: US 1997-36139 19970121
WO 1998-US1222 19980121

AB Disclosed are antibodies that block the binding of fibronectin protein to fibronectin. Also disclosed are site specifically-mutated and truncated peptide epitopes derived from the fnbA and fnbB genes of Staphylococcus aureus, the fnbA and fnbB genes of Streptococcus dysgalactiae, and the sfb gene of Streptococcus pyogenes, and nucleic acid segments encoding these peptides and epitopes. The anti-(fibronectin binding site) antibodies, peptides and epitopes that give rise to antibodies that block the binding of fibronectin binding proteins to fibronectin, and DNA segments encoding these proteins and are of use in various screening, diagnostic and therapeutic applications including active and passive immunization and methods for the prevention of streptococcal and staphylococcal colonization in animals or humans. These DNA segments and the peptides derived therefrom are proposed to be of use directly in the prepn. of vaccines and also for use as carrier proteins in vaccine formulations.

IT ***142062-19-9P*** 187102-34-7P
RL: BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(microbial fibronectin binding protein epitopes and their antibodies for diagnosing and preventing infection)

L44 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1992:444088 CAPLUS
DOCUMENT NUMBER: 117:44088
TITLE: Chemically modified fibronectin-binding peptides and fragments
INVENTOR(S): Hoeoek, Magnus; McGavin, Martin; Raucci, Guiseppe
PATENT ASSIGNEE(S): Alfa-Laval Agri International AB, Swed.
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9202555	A1	19920220	WO 1991-SE534	19910809
W: AU, CA, FI, HU, JP, NO, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
CA 2067233	AA	19920211	CA 1991-2067233	19910809
AU 9184118	A1	19920302	AU 1991-84118	19910809
AU 632001	B2	19921210		
EP 504335	A1	19920923	EP 1991-914903	19910809
EP 504335	B1	19971210		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
HU 61035	A2	19921130	HU 1992-1211	19910809
HU 219261	B	20010328		
JP 05502046	T2	19930415	JP 1991-514015	19910809
AT 161018	E	19971215	AT 1991-914903	19910809
ES 2112862	T3	19980416	ES 1991-914903	19910809
FI 9201582	A	19920409	FI 1992-1582	19920409
NO 9201407	A	19920605	NO 1992-1407	19920409
US 5440014	A	19950808	US 1994-234622	19940428

PRIORITY APPLN. INFO.: SE 1990-2617 A 19900810
WO 1991-SE534 A 19910809
US 1992-846995 B1 19920608
US 1993-55783 B1 19930503
OTHER SOURCE(S): MARPAT 117:44088

AB Fibronectin-binding peptides R1-PSYQFGGHNSVDFEEDT-R2 (R1 = H, K, DK; R2 = OH, L, LP, LPK) are claimed. Synthetic peptides, peptide fragments, and chem. modified peptides derived from a Staphylococcus aureus fibronectin-binding protein homol. unit (D3) were prepd., and the activity of the peptides (ability to compete with S. aureus cells for binding to 125I-labeled fibronectin or fragment) was detd. The fibronectin-binding region of D3 was reduced to a 14-residue core peptide essential for activity but alone not sufficient to inhibit binding; addn. of a tripeptide to the amino-terminus or carboxy-terminus of this core peptide resulted in a dramatic recovery of activity. The fibronectin-binding peptides of the invention can be used for vaccination, wound healing, blocking protein receptors, or for an ELISA.

IT 142062-16-6 ***142062-17-7***
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(amino acid sequence and fibronectin binding activity of)

IT 56-82-6D, DL-Glyceraldehyde, fibronectin binding protein synthetic D3 fragment reaction products 141-43-5D, fibronectin binding protein synthetic D3 fragment reaction products 509-14-8D, Tetranitromethane, fibronectin binding protein synthetic D3 fragment reaction products 616-34-2D, Glycine methyl ester, fibronectin binding protein synthetic D3 fragment reaction products ***142062-18-8*** ***142062-19-9*** ***142062-20-2***
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)

(fibronectin binding activity of)

L44 ANSWER 4 OF 4 USPATFULL
ACCESSION NUMBER: 95:71464 USPATFULL
TITLE: Fibronectin binding peptide
INVENTOR(S): Hook, Magnus, 129 Stevens Hill Cir., Birmingham, AL, United States 35244
McGavin, Martin, 1717 Beacon Crest Cir., Birmingham, AL, United States 35209
Raucci, Guiseppe, Via Tito Speri 10, I-00040 Pomezia, Rome, Italy

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5440014		19950808
APPLICATION INFO.:	US 1994-234622		19940428 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1993-55783, filed on 3 May 1993, now abandoned which is a continuation of Ser. No. US 1992-846995, filed on 8 Jun 1992, now abandoned

	NUMBER	DATE
PRIORITY INFORMATION:	SE 1990-2617	19900810

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Warden, Jill
ASSISTANT EXAMINER: Marshall, S. G.
LEGAL REPRESENTATIVE: Burns, Doane, Swecker & Mathis
NUMBER OF CLAIMS: 1
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6 Drawing Figure(s); 6 Drawing Page(s)
LINE COUNT: 679
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A fibronectin binding peptide having the structure R'-PSYQFGGHNS VDFEEDT-R.sup.2 wherein R' is hydrogen, K or DK, and R.sup.2 is hydroxy, L, LP or LPK is disclosed. The fibronectin binding proteins of the present invention may be used, for example, for vaccination of ruminants against mastitis caused by Staphylococcal infections, for the treatment of wounds, e.g., for blocking protein receptors or for immunization (vaccination) against infection by bacterial strains, and for diagnosis of bacterial infections caused by Staphylococci strains.

IT 142062-16-6 ***142062-17-7***
(amino acid sequence and fibronectin binding activity of)

IT 56-82-6D, DL-Glyceraldehyde, fibronectin binding protein synthetic D3 fragment reaction products 141-43-5D, fibronectin binding protein synthetic D3 fragment reaction products 509-14-8D, Tetranitromethane, fibronectin binding protein synthetic D3 fragment reaction products 616-34-2D, Glycine methyl ester, fibronectin binding protein synthetic D3 fragment reaction products ***142062-18-8*** ***142062-19-9*** ***142062-20-2***
(fibronectin binding activity of)

SEQ 6

=> s qnsgnqsfeedteedkpkyeqpgnivdidfdsvpqihg/sqep

0 QNSGNQSFEEDTEEDKPKYEQPGNIVDIDFDSVPQIHG/SQEP

23669 SQL=38

L11 0 QNSGNQSFEEDTEEDKPKYEQPGNIVDIDFDSVPQIHG/SQEP
(QNSGNQSFEEDTEEDKPKYEQPGNIVDIDFDSVPQIHG/SQEP AND SQL=38)

=> s qnsgnqsfeedteedkpkyeqpgnivdidfdsvpqihg/sqsp

L12 0 QNSGNQSFEEDTEEDKPKYEQPGNIVDIDFDSVPQIHG/SQSP

Free of art

SEQ 8

=> s qnkgnqsfeedtekdkpkyehpgniididfdsvphihg/sqep

0 QNKGNQSFEEDTEKDKPKYEHPGNIIDIDFDSVPHIHG/SQEP

23669 SQL=38

L15 0 QNKGNQSFEEDTEKDKPKYEHPGNIIDIDFDSVPHIHG/SQEP
(QNKGNQSFEEDTEKDKPKYEHPGNIIDIDFDSVPHIHG/SQEP AND SQL=38)

=> s qnkgnqsfeedtekdkpkyehpgniididfdsvphihg/sqsp

L16 0 QNKGNQSFEEDTEKDKPKYEHPGNIIDIDFDSVPHIHG/SQSP

SEQ ID NO:13
=> s kpsyqfpghnsvdfeedtlpkv/sqep

0 KPSYQFPGHNSVDFEEDTLPKV/SQEP
28563 SQL=22
L20 0 KPSYQFPGHNSVDFEEDTLPKV/SQEP
(KPSYQFPGHNSVDFEEDTLPKV/SQEP AND SQL=22)

=> s kpsyqfpghnsvdfeedtlpkv/sqsp

L21 0 KPSYQFPGHNSVDFEEDTLPKV/SQSP

SEQ ID NO:17

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=> s kpspqfgghnsvdfeedtlpkv/sqep

          0 KPSPQFGGHNSVDFEEDTLPKV/SQEP
      28563 SQL=22
L22       0 KPSPQFGGHNSVDFEEDTLPKV/SQEP
            (KPSPQFGGHNSVDFEEDTLPKV/SQEP AND SQL=22)

=> s kpspqfgghnsvdfeedtlpkv/sqsp

L23       0 KPSPQFGGHNSVDFEEDTLPKV/SQSP
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SEQ ID NO:18

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=> s kpsypfgghnsvdfeedtlpk/sqep

          0 KPSYPFGGHNSVDFEEDTLPK/SQEP
      50328 SQL=21
L24       0 KPSYPFGGHNSVDFEEDTLPK/SQEP
            (KPSYPFGGHNSVDFEEDTLPK/SQEP AND SQL=21)

=> s kpsypfgghnsvdfeedtlpk/sqsp

L25       0 KPSYPFGGHNSVDFEEDTLPK/SQSP
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SEQ ID NO:19

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=> s kpsyqpgghnsvdfeedtlpk/sqep

          0 KPSYQPGGHNSVDFEEDTLPK/SQEP
      50328 SQL=21
L26       0 KPSYQPGGHNSVDFEEDTLPK/SQEP
            (KPSYQPGGHNSVDFEEDTLPK/SQEP AND SQL=21)

=> s kpsyqpgghnsvdfeedtlpk/sqsp

L27       0 KPSYQPGGHNSVDFEEDTLPK/SQSP
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SEQ ID NO:20

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=> s kpsyqfgphnsvdfeedtlpk/sqep

          0 KPSYQFGPHNSVDFEEDTLPK/SQEP
      50328 SQL=21
L28       0 KPSYQFGPHNSVDFEEDTLPK/SQEP
            (KPSYQFGPHNSVDFEEDTLPK/SQEP AND SQL=21)

=> s kpsyqfgphnsvdfeedtlpk/sqsp

L29       0 KPSYQFGPHNSVDFEEDTLPK/SQSP
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SEQ 54
=> s advveyeedtnpgpgqvttesnlvefdeest/sqep

0 ADVVEYEEDTNPGPGQVTTESNLVEFDEEST/SQEP
20887 SQL=31
L1 0 ADVVEYEEDTNPGPGQVTTESNLVEFDEEST/SQEP
(ADVVEYEEDTNPGPGQVTTESNLVEFDEEST/SQEP AND SQL=31)

=> s advveyeedtnpgpgqvttesnlvefdeest/sqsp

L2 0 ADVVEYEEDTNPGPGQVTTESNLVEFDEEST/SQSP

SEQ 55
=> s advveyppdtnpppgqvttesnlvefdeest/sqep

0 ADVVEYPPDTNPPPGQVTTESNLVEFDEEST/SQEP
20887 SQL=31
L1 0 ADVVEYPPDTNPPPGQVTTESNLVEFDEEST/SQEP
(ADVVEYPPDTNPPPGQVTTESNLVEFDEEST/SQEP AND SQL=31)

=> s advveyppdtnpppgqvttesnlvefdeest/sqsp

L2 0 ADVVEYPPDTNPPPGQVTTESNLVEFDEEST/SQSP

SEQ 56
=> s qnsgnqsfeedteedkpkyeqggnivdidfsdsvpqihg/sqep

0 QNSGNQSFEEDTEEDKPKYEQGGNIVDIDFSDSVPQIHG/SQEP
8634 SQL=39
L3 0 QNSGNQSFEEDTEEDKPKYEQGGNIVDIDFSDSVPQIHG/SQEP
(QNSGNQSFEEDTEEDKPKYEQGGNIVDIDFSDSVPQIHG/SQEP AND SQL=39)

=> s qnsgnqsfeedteedkpkyeqggnivdidfsdsvpqihg/sqsp

L4 0 QNSGNQSFEEDTEEDKPKYEQGGNIVDIDFSDSVPQIHG/SQSP

SEQ 57

=> s qnsgnqsfeedteedkpkyeqpgnivdidfsdsvpqihg/sqep

0 QNSGNQSFEEDTEEDKPKYEQPGNIVDIDFSDSVPQIHG/SQEP

8634 SQL=39

L5 0 QNSGNQSFEEDTEEDKPKYEQPGNIVDIDFSDSVPQIHG/SQEP
(QNSGNQSFEEDTEEDKPKYEQPGNIVDIDFSDSVPQIHG/SQEP AND SQL=39)

=> s qnsgnqsfeedteedkpkyeqpgnivdidfsdsvpqihg/sqsp

L6 0 QNSGNQSFEEDTEEDKPKYEQPGNIVDIDFSDSVPQIHG/SQSP

SEQ 59
=> s qnkgnqsfeedtekdkyehpgniididfdsvphihg/sqep

0 QNKGNQSFEEDTEKDKYEHPGNIIDIDFDSVPHIHG/SQEP
19158 SQL=36
L9 0 QNKGNQSFEEDTEKDKYEHPGNIIDIDFDSVPHIHG/SQEP
(QNKGNQSFEEDTEKDKYEHPGNIIDIDFDSVPHIHG/SQEP AND SQL=36)

=> s qnkgnqsfeedtekdkyehpgniididfdsvphihg/sqsp

L10 0 QNKGNQSFEEDTEKDKYEHPGNIIDIDFDSVPHIHG/SQSP